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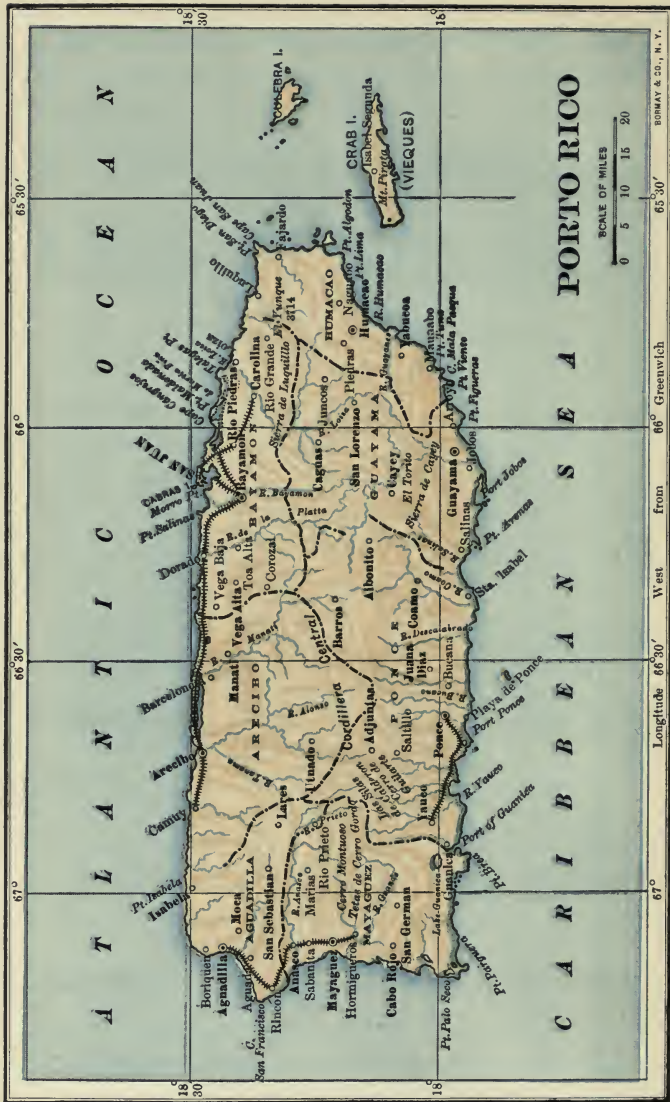
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THE
WORLD AND ITS PEOPLE

BOOK XII.

*PORTO RICO: THE LAND OF
THE RICH PORT*

BY

JOSEPH B. SEABURY



SILVER, BURDETT AND COMPANY
NEW YORK BOSTON CHICAGO

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PREFACE.

DURING a brief period of time, now regarded as forming an epoch in American history, Porto Rico came into prominence as an important section of the island-world. Although it lies nearer to the United States than to any other of the great republics or empires of the globe, it was comparatively unknown to the American people. We knew its location, but not its physical features; its people, but not their domestic life, their daily tasks and pursuits. We regarded this fertile island as permanently allied with a European power, with no thought of possessing it ourselves. We had come to think of this Republic of ours as always to be confined within continental boundaries, and not at all likely to embrace in her territory insular lands.

Five years ago our acquaintance with Porto Rico was of that general character as now marks our knowledge of Madagascar, Sumatra, or Borneo; it lacked definite detail.

Great events in current history, especially the conquest of arms on land and sea, necessitating changes in the map of the world, awaken a desire for more specific information regarding those portions of the globe where historic events have occurred and conquests have been made. If, as Mr. Webster once said, "Knowledge is the great sun in the firmament," then knowledge must be precise, accurate, and, in a measure, technical.

The transfer of Porto Rico from the control of Spain to that of the United States was the signal for a widespread, popular desire for thorough and reliable information regarding a portion of the globe which had so unexpectedly passed into new hands.

This book has been written for young people, and is designed to broaden their acquaintance with Porto Rican life. The account is given from the point of view of one approaching the island, entering it at one of its open gateways, and looking for the first time upon its fascinating scenery, its busy streets, its rural occupations. An earlier volume in this series, "The Story of the Philippines," tells of centuries of warfare, of struggles for independence; but Porto Rico has no prolonged and varied history, no exciting historical periods. For this reason but little space is given in this book to the annals of the past. The writer's aim has been to picture the island as it is to-day, with its face turned toward the future.

Unlike the Philippines, which are large clusters of islands within a vast archipelago, Porto Rico is but one link in a chain of islands, is at its eastern extremity, and apart by itself.

It is interesting to note that Porto Rico has an area five hundred square miles less than Hawaii, the largest island of the group that bears its name, while the area of all the Hawaiian islands is twice that of Porto Rico. Its smallness, its compactness, and the unity and variety of its products make it an attractive and satisfactory object of study.

Since the stirring events of 1898, the value of Porto Rico to the United States has steadily increased. It

has become equally apparent that Porto Rico needed just such a friend as the United States is proving herself to be. The one purpose which has actuated our government has been adhered to, viz. to improve the condition of the people, to give them larger returns for their labor, to provide them with better sanitary laws, better schools, better dwellings. This complex problem the United States is now working out.

Porto Rico has not filled a very important place in the literature of American travel and research. Up to the time when the fortunes of war so materially changed the status of the island, nearly all the books written on the subject were in Spanish and issued from the presses at Madrid. The only notable exception is the valuable work by Colonel George D. Flinter of the general staff of the army of the Queen of Spain. The book is in English, and gives a reliable account of the "Present State of the Island of Porto Rico"; it was published in 1834. It has been used, to some extent, in the preparation of the present volume. The author has also found useful the latest government reports, which are compiled from careful investigations by United States officials.

It is hoped the reader will make good use of the map of Porto Rico, it being indispensable that in exploring a new country frequent reference be made to its geographical features. The Table of Pronunciation should be of service to the reader in making himself familiar with Porto Rican proper names, so many of which are entirely new to him.

J. B. S.

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PORTO RICO :

THE LAND OF THE RICH PORT.



CHAPTER I.

THE ISLAND OUTLINES.

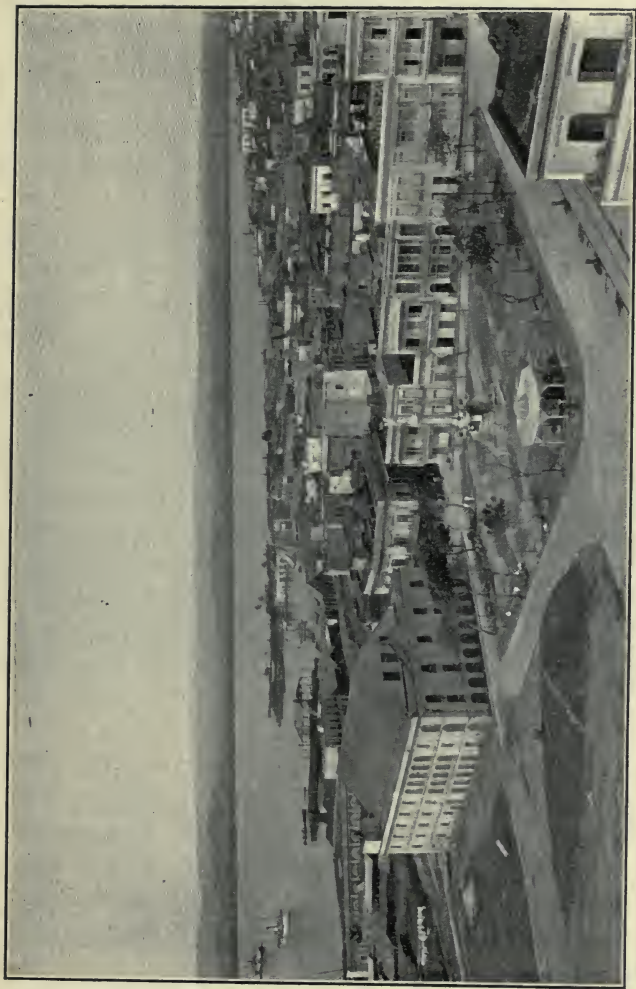
IF we turn to the map of the United States and trace the eastern coast downwards from Boston or New York, we find that it ends with Florida. But there is more land beyond. The peninsula of Florida points directly to an island which appears, as we look at the map, something like a fish, with its tail bent towards South America. It is called Cuba. The nose of the fish extends towards another island, shaped like a horse's head, and known as Haiti. The horse's ears stretch up in the direction of Cuba, while the nose is almost on a line with a still smaller island, resembling in shape an ordinary building brick. This little island, the smallest of these bodies of land, is Porto Rico.

Let us study the location of Porto Rico a little more closely. If a line should be drawn between Cape Sable and the most eastern point of Honduras, and these two points should then be connected by straight lines with Porto Rico, the island would be the apex of the triangle

thus formed. Porto Rico is washed on its north shore by the Atlantic Ocean, and on the south by the Caribbean Sea, while to the east are the Leeward Islands.

As we glance at the map once more we can see that the group of islands of which Porto Rico is one is generally known as the Greater Antilles. Before Columbus discovered America, many people in Europe were of the opinion that if some one would take the trouble to investigate the matter, a large island would be found in the Atlantic Ocean, far west of the Azores. No one had ever reached this island, so far as any European knew, but it was spoken of as Antilla. The word comes from the Latin *ante*, meaning in front of, and *insula*, an island. The name Antilles was afterwards given to some of the islands on which Columbus first landed. In later times the islands between North and South America were generally called the Antilles, with the exception of the group known as the Bahamas. The four largest of the islands, Cuba, Haiti, Jamaica, and Porto Rico, are distinguished as the Greater Antilles, the groups farther to the southeast, which embrace twenty-six islands in all, being known as the Lesser Antilles.

The Antilles form a sort of curved line from the entrance to the Gulf of Mexico almost around to the mouth of the Orinoco River. Porto Rico is at the large bend of the curve, and is the most easterly and the smallest of the Greater Antilles. Haiti, its next-door neighbor on the west, is eight times as large, and Cuba occupies about space enough to hold an even dozen bodies of land of the size of Porto Rico. We might think from this that Porto Rico is a small and insignificant island. It is really, however, about three times as large as Rhode Island,



SAN JUAN, SHOWING COLUMBUS PLAZA AND INNER HARBOR.

and is one of the most interesting regions that we hear anything about. We shall find it quite worth our while to visit Porto Rico, and we shall enjoy making acquaintance with the plants and animals and people of this ambitious little island, just north of the Caribbean Sea. To reach it we must take a sail of fourteen hundred miles; if we start from New York, a five days' voyage.

The island has been compared to various objects. One writer has seen in its shape some likeness to an ox dressed and ready for market. By a little play of imagination we can easily trace the outlines of a human profile in the western coast-line. The southwestern portion, Point Aguila, is the long, square, and prominent chin. The deep depression forming the harbor of Mayaguez is the bold mouth, open as if about to speak. Cape San Francisco is the upturned nose. The eye is at Moca, and above it appears the forehead, low and flat.

The Japanese people are so proud of their beautiful mountain Fusi-yama, that we can hardly find one of their pictures, even on a fan, that does not show this snow-topped mountain in the background. The people of Porto Rico have a mountain of which they are nearly as proud. It is called El Yunque, and it is the first object that attracts the eye as we approach the island from the north. If the day is clear, we shall probably catch our first glimpse of picturesque El Yunque when we are still seventy miles from land. As we sail nearer, we begin to distinguish what appears to be a long stretch of cloud, but which is really the low-lying shore of the island itself. Soon the sky-line becomes wavy, then abruptly broken, and finally the irregular summits of other mountains come within our view.

As we approach still nearer San Juan, we feel that the island was indeed rightly named Porto Rico, the "rich port." Along the lower portions, near the coast, are wide stretches of green, which extend upwards to the sloped sides of the hills. We can see between the hills the narrow valleys, the cultivated fields and white villages, with their fringes of tall and majestic palms,



LA PUERTA DE SAN JUAN. THE ONLY REMAINING CITY GATE.

"resembling Indians with feathers and plumes." Forming a background for all are the ridges of hills and mountains, rising one behind the other, each ridge higher than that in front, and reminding the observer of the rolling billows of the sea. Some of the slopes are covered with forests, with every coloring of green from the lightest to the darkest shade. The picture, as we see it from our place on the steamer's deck, is certainly

a charming one. No wonder the island is known as "a rich garden spot."

The observer is especially impressed with the smallness of everything. Travelers often speak of Porto Rico as a country in miniature. Many of the hills are hardly more than knolls, yet they are so rounded and so perfect in shape that they are recognized at once as hills. The mountains, with one or two exceptions, would hardly be called by so dignified a title were they in the neighborhood of our mighty Rockies or Adirondacks. Yet they show their peaks and chains as distinctively as those to be seen on the continent. And the gardens, the trees, the rivers, and the lakes — all are in the Porto Rican landscape, but all are of diminutive size. The Porto Ricans themselves, while not so large nor so rugged as the people of the northern and colder climates, are well proportioned and sensitively organized.

Before we land at San Juan, let us sail around the island and see what the other sides are like. On the south, by the Caribbean Sea, the mountain range runs nearer to the coast. The hills rise up in ridges with here and there a sharp peak. Columbus first saw the island from the south, and, on his return to Spain, he spoke to Queen Isabella of the picturesque effect. The mountains of the island, according to his report, appeared to him like a handkerchief folded and wrinkled.

But whatever be the direction of approach, hills of great beauty will be seen. To the south the mountains reach the very water's edge. To the west the slope is gradual and extends also to the shore. On the northern side, and on the southern side east of Ponce, wide

sandy stretches connect the uplands with the sea. To the southwest, beyond Ponce, are coast-hills, some of them slanting from the central mountain and ending in bold bluffs a hundred feet high. Beyond these are grace-



SEA WALL FROM SAN CRISTOBAL. EL MORRO IN THE DISTANCE.

ful valleys, in one of which is the Lake of Guanica. Near by are the *cerros*, low, rounded, wooded hills, similar to the "knobs" of our Western States.

Like the coast of Maine, the shore of Cuba is dotted with islands. Porto Rico, on the other hand, has very few, excepting on the eastern side. There the waters are dotted with little islands and reefs, of which Vieques, the principal one, was used by the Spaniards as a military prison. Soldiers were kept there, when convicted of crime. The lonely island of Desecho, off the western coast, is the home of millions of sea birds that build their



EL MORRO AND CITY OF SAN JUAN, LOOKING ACROSS THE HARBOR ENTRANCE FROM CABRAS ISLAND.

nests among its rocks. As we pass by on the steamship these birds present a striking picture, fluttering over their young, soaring above the water, or diving beneath its surface in search of food.

As may be seen by reference to a map of the West Indies, the whole island protruding above the surface of the water is a section of the great ridge which extends lengthwise over both North and South America, and of which Cuba and Santo Domingo are also portions. The land on the west side of the island ends in abrupt cliffs, while on the east the ridge continues unbroken, save that all, except the portion which appears as small islands, is under the surface of the water.

We will land at San Juan. Farther west there is no good harbor on the northern coast. Even the busy seaport Arecibo is open to the sea. On the south side, Ponce, a flourishing center of trade, has a long, curved anchoring place, with no wharves to which vessels may tie. Nor can the ships that engage in trade with Porto Rico moor even on the western coast; they must anchor at a distance from shore and unload by means of light boats. So we will land at San Juan, for here our ship will find safe shelter, after it has once made its way within the landlocked harbor.

Just where is this island of Porto Rico to which we have come? We have found it a five days' trip from New York. It is 450 miles from the southern point of Florida, and many miles farther east than the easternmost portion of Maine. Halifax is two thousand miles away, London twice that distance. The equator is still a thousand miles towards the south.

Although the United States extends into the warm

regions of the sunny south, it has never, until recently, possessed soil capable of growing some of the great staples of the tropics. Porto Rico and the Philippines have given to our country the very best climate and soil for the cultivation of sugar, coffee, and numerous fruits, cereals, and spices which we think we can hardly do without. Porto Rico is a territory of the United States as truly as is Arizona or New Mexico. Its interests are the concern not only of our government, but of the people as a whole.

The United States has other "gardens" committed to its care, — the great fruit-growing regions of Southern California; the broad cotton-belt of the South; the treasure lands of Colorado; the Hawaiian Islands, "the land of the Rainbow and the Palm"; but our real garden, whose soil is "rich with the spoils of nature," is in the blue waters of the Atlantic and beneath the tropical sky to the north of the Caribbean Sea.

CHAPTER II.

ODD SIGHTS IN PORTO RICO.

VERY early in the morning we are aroused from our slumbers by the hoarse cries of the fruit-venders. As we peep through the window to find what it all means, we see people carrying on their heads great willow trays of fresh fruit. Piles of luscious yellow and copper-colored mangoes; great heaps of the brown melons known as mameys; bananas of a dozen different varieties, from the coarse cooking-banana nearly a foot in length to the dainty little fig and apple bananas, so called from their flavor; pyramids of sweet-smelling pineapples; green cocoanuts, ready to refresh the purchaser with their cooling milk; quantities of that most delicious of tropical fruits, the custard apple—beside oranges, lemons, citrons, alligator pears, the juicy cactus fruit, and many other kinds for which the English language has not even a name—all these form the contents of the baskets. Throughout the towns and cities, and even along the dusty highways, men, women, and children of all shades from white to black may be seen with the tempting fruit-trays on their heads. Every city block can boast its little shop where one may purchase the most appetizing fruits at a trifling cost, or may refresh himself with a glass of sugar-cane or cocoanut juice.

The fruit-vender is followed a little later by the milkman, or woman, who comes slowly along, riding astride a broad-backed burro, across whose flanks are slung the large milk cans, one on either side. The milkman carries neither bell nor horn to announce his coming, nor

is there need of either. The intelligent little burro knows his route well, and the entrances to the houses are so wide that in most places the milk is delivered at the very door, through which the animals often pass directly into the kitchen itself. Formerly, and even yet in some districts, the cows with their muzzled calves were driven from door to door, that patrons might see the actual milking process. Satisfaction was somewhat marred, however, by the presence of the calves, which were robbed of their birthright before the purchasers' very eyes. Occasionally, nowadays, a milkman, more ambitious than his neighbors, sets himself and his cans on the top of a rickety two-wheeled cart. This method of delivery is an innovation that is not likely to become general, however, for some time to come.

The baker-man passes along the streets displaying his wares in plenty of time for early breakfast. His commodities, also, are carried in a basket on his head. The basket is arranged with the long loaves of bread radiating from the center so as to allow fully half of each loaf to project over the side. The smaller rolls are heaped up in the center. The basket is easily upset, but, if this accident should occur, the carrier leisurely and philosophically gathers up his scattered wares, wiping off the mud or dust with his handkerchief. In case of rain, which is apt to fall during the rainy season with scarcely a moment's warning, he is provided with a piece of oilcloth. This covering he is more likely to use for his own protection than for that of his basket, rather to the detriment of his bread.

All people of the Latin races are fond of sweets. The Porto Ricans seem even to have lengthened the list

of dainties handed down to them by their Spanish ancestors. The abundance of native crude sugar, almonds, cocoanuts and other nuts, affords unlimited opportunity for sweetmeats, while the delicious fruits provide full scope for the confectioner's genius in the way of sugared fruits. And yet, strangely enough, any Porto Rican boy or girl would gladly exchange a basketful of sweet-



THE MILKMAN.

meats and cakes of Porto Rican manufacture for a box of American candies, even if the latter were very stale. Cakes and sweets of various kinds are for sale at all times, and the children are nibbling them wherever we turn.

As in most tropical countries, poultry is sold alive. Porto Ricans would view with horror the average American poulterer's display of what to them would be simply "dead fowl." Men go about from house to

house, carrying on each arm a dozen live chickens tied together in pairs and suspended by the feet. Geese and turkeys for sale are often driven through the streets in flocks. Their progress is marked by many amusing incidents which tend to confirm the Spanish proverb to the effect that the turkey is the most foolish of birds. Our expression "as silly as a goose" would be considered according to Spanish notions an unfair reflection on this, in their opinion, canny bird. If night overtakes the turkeys or geese before they have reached their destination, the boy or girl who has them in charge is left in a sad predicament. The creatures insist upon going to roost wherever they happen to be. As no amount of gentle switching with the long bamboo driving-rod moves them in the least, the unfortunate person in charge is compelled to make the best of the situation and "go to bed with the chickens."

Cigar and cigarette sellers are very numerous. Oftentimes the stock in trade consists of a single box of cigars offered at the entrance to post-office, theater, or hotel, by some barefooted negro or boy. Sometimes a full assortment is displayed from the top of a common soap-box mounted on a child's express-wagon.

Not only can fruit, milk, bread, and fowl be purchased at one's very door, but dry goods are trundled, often by the owner himself, from house to house over the shining white roads around San Juan. A large variety of these commodities, from silks to the all-important mosquito netting, as well as ribbons, tapes, and shoe laces, is displayed temptingly before the lazy customer as she sits comfortably in her rocker or within the cool shade of her veranda. The various wares are car-



INTERIOR OF MARKET, SAN JUAN.

ried patiently back and forth from street to dwelling, in case the occupant is unwilling to go out into the glare of the sun, until a choice is made and satisfaction secured. To a bystander, haggling over prices is most amusing. Buyer and seller regard each other for the time as enemies, and prices are fixed and discussed accordingly. To the Anglo-Saxon visitor the curious part of it all is, that no matter how close the bargaining, the business is conducted with unfailing politeness. The salesman is, as he puts it, "at the feet" of his customer throughout the entire transaction, and is "hers to command" at the close as at the beginning.

One of the principal occupations of the inhabitants of the rural districts is the making of hats, some of which equal the finest Panamas. Some of the Porto Rican hats have been sold at wholesale in the United States for as much as twenty dollars apiece. Many of the better grades of these hats can be rolled up into a space no larger than that required for a handkerchief, and they are woven so fine as to be absolutely waterproof. Cinches and bridles are made from the same material, and it amuses the Porto Ricans greatly to find that American girls employ the latter for use as hatbands and belts. The edge of many of the hats is left unfinished, the ends of the straw projecting eight or ten inches beyond the weaving—the effect being most picturesque. The hat vender, with his patient little pony almost completely hidden by the pyramids of hats piled around him, is a common sight in both the cities and the smaller towns. The pony's size is so increased by his load of hats that it is as much as he can do to make his way through some of the narrow streets.

The laundresses carry on their vocation daily at every wayside brook, river, and stream. Barefooted and bare-legged, with skirts tucked up well out of reach of the water in which they stand or by which they kneel, they launder the clothing after the most primitive fashion.



HAT SELLERS.

The American housewife, upon viewing the dazzling whiteness of the linen returned to her by the Porto Rican laundress, is unable to comprehend how such results can be attained with no better appliances than cold water and soap. The explanation lies in the fact that the linen is washed on three or four successive days, receiving each time a vigorous beating with a small

wooden paddle. After each cleansing the clothes are spread upon the ground to bleach for hours under a tropical sun. After the third or fourth washing the linen is starched and then dried again.



NATIVE LAUNDRY.

The week's washing and ironing completed, the laundress must carry home the finished work. The smaller flat and unstarched pieces are folded carefully and piled up in the middle of one of the shallow baskets so generally used. Around these, on hooks attached to the sides

of the basket, are hung the starched skirts, aprons, and other garments that might be crushed by folding. The basket is then balanced on the head, the laundress herself being concealed, from the knees up, by the trophies of her skill. Her work is freely complimented, or criticised, as circumstances may warrant, as she meets other laundresses of her acquaintance. No society woman could be more anxious regarding her appearance than is the Porto Rican laundress for herself and her basket, especially the latter, when preparing for her weekly triumphal march, "carrying home the wash."

Every Sunday afternoon, and on all holidays, we are likely to meet, on any of the suburban roads, processions of curiously uniformed children walking sedately hand in hand, led and followed by nuns, or by priests, should the procession be made up of boys. These are the children from the charity schools, taking an outing. They range in age from midgets who can barely walk to youths or girls of fifteen years. The latter wear holland or jean pinafores, and the boys blouses and overalls. The happy disposition of the islanders is once more apparent, as these processions, so pathetically solemn in Germany, England, and France, move gayly along, the little folks talking to each other and watching with the deepest interest the sights by the way. Most of the children are learning trades, that they may become in future years useful and self-supporting members of the community.

Before the American occupation the towns and cities swarmed with beggars, whose numbers were increased by most of the blind, crippled, or otherwise hopelessly infirm portion of the poor people. Some of these have been

placed in institutions where they are cared for in a far better way than was possible when they were entirely dependent upon the charity of strangers. Nevertheless, on certain days of the week set apart by Spanish tradition for the giving of alms, a motley collection of battered human wrecks may still be seen at the doors and gateways of



A BEGGAR.

the more piously inclined among the old Spanish families in San Juan, and even at the shop doors of some of the Spanish merchants. At the stroke of twelve the copper coins are handed out. The donor, generally the aged master or mistress of the household,—although the task is sometimes handed over to the children,—moves from one to another of the group of beggars, giving with the coins kind words of inquiry, counsel, or comfort. Americans have occasionally wondered at the seeming ingratitude of some forlorn cripple who, in the comfort of a newly established asylum,

still sighed for the touch of human sympathy without which he could not be happy. All beggars are answered with kind words in Porto Rico, the traditional reply when aid is refused being, "Pardon me, brother," or "Pardon me to-day, sister."

Street musicians are many, the favorite instruments being the guitar, the mandolin, and the bandurria. The

American two-step and rag-time music are becoming very popular, greatly to the disgust of the foreign sojourners, who enjoy much more the plaintive minor melodies of the island or those gayer airs transported from Southern Spain.

The cockfighter with his gamecock under his arm, his shears suspended about his neck, and on the lookout for an adversary, is fortunately becoming a rare figure, since the enforcement of the stringent rules against cock-fighting instituted by the American government. He and his equally obnoxious companions, the lottery-ticket seller and the quack doctor, can well be spared.

Funeral and wedding customs among the poorer classes in San Juan are curiously unlike those existing in the United States. In the former, interments are made usually within twenty-four hours after death, and one often sees the rough pine boxes, painted black inside and out and marked with a white cross on the lid, being carried home from the carpenter's shop where they were rudely and hastily put together. These coffins are entirely unlined and cost about a dollar each. A niche in the great wall of the cemetery is rented for six months or a year, where the coffin is laid by the mourners, who follow the bearers on foot. At the close of the rented period the remains are thrown into a common receiving-vault, with the bones of many others there before them. There are no religious ceremonies of any kind at the grave, except where the deceased has been a member of some fraternal or political society, when funeral orations of a more or less flowery character are delivered.

The death of young children, especially in the country districts, was formerly, and is still, to some extent, made

the occasion of feasting and even merriment, with the accompaniments of singing and dancing. "The little angel," as they consider the child to be, is laid, in its best frock and with a crown of flowers, before a species of rude altar made of rough boards and adorned with fresh flowers. Lighted candles and tinsel decorate the center of the room in which the feasting is going on. The mother, with eyes swollen from much weeping, makes pathetic attempts to smile a welcome on the guests who come to celebrate the entrance of "the little angel" into a better world.

A far more pleasant sight is the country wedding. Away back in the mountain districts of the coffee region, previous to the American occupation, weddings were of the quaintest simplicity. Very seldom did either of the contracting parties possess suitable garments, or the money to purchase them. The alcalde, or village mayor, with kindly foresight and at the same time a keen eye for business, was ready to loan the bride and groom clothing so old-fashioned and ill-fitting, that it would be hard to find it equaled, even in a grandmother's garret. Thus arrayed, the pair proceeded to the alcalde's office, where the civil marriage service was performed. Then came the religious ceremony at the hands of the village priest, after which the pair mounted an ox-cart, and accompanied by neighbors and friends, whose numbers were continually increasing, they rode in state to their new home.

Porto Rican country people have never heard of the Anglo-Saxon custom of throwing rice at a newly married couple, but they see to it that the bridal procession is sufficiently heralded. The pins of the solid wooden

wheels of the ox cart are intentionally so tightened that the ordinary squeaking is increased until the noise is quite sufficient to inform everybody within hearing of the joyous event.

This and many other quaint customs are rapidly disappearing under the more practical if less picturesque rule of the United States. The alcalde is already replaced by the more businesslike municipal judge; "store" clothes are appearing in the most unexpected quarters; the clang of the electric car in places dulls even now the creaking of the ox cart; and the American sewing-machine, bicycle, refrigerator, and cooking-stove can be confidently relied upon to complete the social revolution.



CHAPTER III.

THE PEOPLE—THEIR HOME LIFE.

THE homes of the well-to-do people of the island are very comfortable. In many cities of the United States buildings are constructed with shops on the ground floor and apartments above. This is a very common arrangement in Porto Rico, especially in San Juan, the first floor being used for shops, a family living on the second. At Mayaguez there are fine dwellings with broad, inviting verandas.

Many of the prosperous merchants of San Juan live at Santurce, three miles from the city. This charming

suburb contains many beautiful homes surrounded by large and attractive gardens. The long double windows of the houses reach to the floor, and usually stand wide open, to let in all the breezes that may blow in that warm climate.

Within the house there is an air of contentment, but all is simple and plain. The floors are bare, save for an occasional rug or a bit of matting. There is no upholstered furniture — nothing more luxurious than cane-seated settees, sofas, and chairs. Rocking-chairs are very popular. Few pictures adorn the walls, though some steel engravings may be found, and now and then a good oil painting. Every parlor has in the center a marble-topped table, usually of mahogany, with carved legs. The chairs are of smooth wood bent into graceful shapes and always painted black. Plants, artificial flowers, crocheted tidies, porcelain vases, lace curtains, and a glass lamp or chandelier complete the outfit of the “best room” in the Porto Rican home of the better sort.

The home life is as simple as the house. The Porto Rican begins his day by drinking a cup of coffee with milk and sugar, at about seven or eight o'clock in the morning. Breakfast is served at eleven, and consists of a light repast of soup, boiled eggs, rice, fried bananas, bread and coffee. Dinner, at six or seven in the evening, is the important meal of the day. At this time all the members of the family come together, ready to enjoy one another's company. The dinner consists of soup, meat, a salad, plenty of vegetables, fruits and sweets, and the meal winds up with the all-important cup of coffee.

The vast majority of the people of the island live in the country. To know Porto Rico well we must know its peasants. We must break away from the cities and visit the rural districts; we must tarry in the villages and hamlets; we must enter the dwellings of the peons, or field laborers, and see how they live. Nothing reveals



WAYFARERS.

the life of any man so clearly as the place he calls his home. There is an old poem which says :

“ If happiness we prize,
Within our breast this jewel lies,
And they are fools who roam.
The world has nothing to bestow :
From our own selves our joy must flow,
And that dear hut, our home.”

The home of the peon, if home it can be called, is a rude hut or "shack." Its rough frame is built of poles lashed together, covered with bark, and roofed with palm leaves or a thatch of leaves from the sugar-cane. There are never more than two or three rooms. The floor is uneven and unsteady. The walls are neither papered, plastered, nor sheathed, but the rough poles of the framework are exposed to view. As there is no winter in Porto Rico the windows need no sashes, and no fuel is required to keep the body warm. All that is necessary is a shelter from the wind, the rain, and the burning sun.

The peon's hut boasts very little furniture. A hammock, a bunk, or a pile of palm branches serves for a bed, a couple of boxes for chairs. Very seldom do we find a table. An iron kettle or earthen pot is the only kitchen utensil, and for cooking this is placed over burning charcoal or bits of kindling-wood. When the weather is favorable the necessary cooking is done out-of-doors. On rainy days, when the food must be cooked within, the house is filled with a damp, suffocating smoke which clings to everything and cannot be driven out.

The prepared dishes of the poor are rice, powdered and curried, corn meal, and coffee. The people are very fond of salt fish. Fresh and cooked fruits, such as bananas and plantains, are eaten in large quantities.

The dishes are made of gourds. Cups, and even ladles and spoons, are among the gourd dishes in common use. A fierce-looking instrument called a *machete* (pronounced mä-chā'tā) serves as a chopping and carving knife. Fingers are used instead of forks.

United States Commissioner Carroll writes of a visit

he made to the poor quarters of Arecibo. He found the houses built of old boxes or short boards, evidently picked up wherever they could be found. The dwellings stood near together in rows, with alleys or very narrow streets between. In one house he saw a man and his wife sitting on the floor and eating their noonday meal from a single dish. A naked child stood in the rear room, crying. There was neither chair nor table, and only one



NATIVE HUTS.

small wooden stool. The roof was full of holes. Some of the houses in the neighborhood were a little better, but poverty was everywhere evident. And yet the people did not seem unhappy; they were probably contented, because they knew no other kind of life.

The peon is up before daylight. He takes his bit of codfish and rice and starts off to his day's labor. In many cases he must walk three miles to his employer's

cane field and be ready to begin work at sunrise. He toils the long day through, save for a short hour's rest at noon, and not until the twilight is deepening into darkness does he make his homeward journey. For his



WINNOWING RICE.

day's work he is paid about forty cents, receiving his wages at the end of the week. Out of this meager sum he buys his codfish, a little clothing, and a few other absolute necessities for his family. Whatever is left he devotes to personal ends, rarely laying anything aside.

The clothing of the poor people is cheap and scanty. Many little children go naked. Of the 950,000 inhabitants of the island only about 200,000 wear shoes. Of these

50,000 have only one pair a year. Among Porto Rico's needs, shoes stand next to good food. When the social condition of the people is improved these material blessings will be demanded. With the requirements of the body supplied, the desire will come for plaster on the walls, chairs, pictures, books, flowers, and many other things that add to the comfort of life.

The Porto Ricans are a courteous and gentle people. Their kindness to strangers is very marked. If a favor



ANOTHER TYPE OF HUT.

is requested, we may be sure that it will be granted willingly. If we ask the way to a certain place, our informant will go the whole distance, if need be, that we may be sure to take exactly the right direction. A

writer of a century ago said that the Porto Ricans were "hospitable to strangers." They certainly are so to-day.

Dr. Carroll classifies the people of the island according to the three colors, *white*, *gray*, and *brown*. The first class, the *white*, comprise the largest number, nearly



A GROUP OF NEGROES.

590,000 people, according to the last census. Many of these are well-to-do—the owners of the great sugar and coffee plantations, or merchants of the larger cities and towns. A majority of them, chiefly in the interior, are, however, of the working class. They toil in the fields, planting, cultivating, and harvesting the coffee and sugar-cane.

The *gray* represent the inhabitants of mixed blood, often called mulattoes. They are more than 300,000 in number. They are darker than the white people, and yet in many cases it is hard to distinguish the color-line. They work in the fields, act as house servants in the cities, or have their own little gardens of vegetables and fruits, from which they gather just enough to enable them to keep body and soul together.

The *brown*, or, as we say in our country, the black, are the negroes, who number about 59,000. They live principally along the coast. This is largely due to the fact that they do not suffer from the heat, while the bracing air of the mountains is too cool for them. They work in the cane fields, or are employed in loading and unloading the ships that enter San Juan, Mayaguez, Arecibo, or Ponce.

There are seventy-five Chinese in the island. Including these, the entire population numbers 953,200. This is nine-tenths as large as the population of Maryland. During the last ten years Porto Rico has grown as rapidly as have Ohio and Tennessee.

It is said that if you scratch a Porto Rican you will find a Spaniard underneath the skin. The people have spoken the Spanish language ever since Columbus's day, and the customs of the island are similar to those of Spain.

As in the mother country, the women of the higher class live to some extent in seclusion. The people are excitable, fond of amusements, and they read very little. In these respects the Porto Rican of to-day resembles the Spaniard of four hundred years ago.

The ancestors of many of the Porto Ricans came from

Andalusia. This province bears a relation to the other provinces of Spain somewhat similar to that of Ireland to Great Britain. Like the Irish, the Andalusians are bright, witty, rather quick-tempered, perhaps, but never holding a grudge.

A similar temperament is characteristic of the people of Porto Rico. Although the blood of different classes mingles freely in their veins, they have never been a rebellious or a warlike people. No general insurrection has ever occurred in the island. If any criticism can be brought to bear upon them, it is that they have been too submissive and long-suffering under Spanish rule. They have never shown a warlike spirit towards the people of other islands, and they are, on the whole, orderly and docile, peaceable, industrious, considerate of one another's welfare.

They are anxious to become American citizens and to acquire American ways. They have long considered the United States another name for fidelity, humanity, and brotherly love. They are, as Dr. Carroll says, good material out of which to make steady and trusty American citizens.



CHAPTER IV.

THE PEOPLE — THEIR RECREATIONS.

It is said that a noted musician in ancient Greece was severely punished by the Spartans for adding a twelfth string to the harp. His fellow-citizens were afraid that too great fondness for music would make the people



CHILDREN IN CARNIVAL COSTUME.

weak. The feeling in regard to music has entirely changed since Sparta's day. In modern times the appreciation of music is considered a great advantage, and nations especially musical, like Germany and Italy, are regarded as superior to those which care little for the art of sound. Porto Rico's love of music is, then, one of the many points in her favor. As a rule, the people have good voices, and sing with pleasing effect, alone and in chorus. Every city, every town, and every little hamlet supports its band of musicians. Concerts are given twice a week in every important plaza throughout the island. All the people attend these concerts; they promenade back and forth for two joyous hours, clad in their best, chatting to each other, listening meanwhile to the music. There are many Creoles in the island, natives who have in their veins French and Spanish blood; a fact which may partly account for the reputation it has for good singing.

A group of guitar and mandolin players on the street corner is a daily sight in cities like Ponce and San Juan. Towards evening, when the work of the day is done, many voices may be heard singing merrily, now a clear tenor or soprano alone, or again a chorus, joining heartily in a Spanish serenade. One often hears, from some unknown quarter, the national air, "Borinquen," which proclaims the beauty of the isle. Though really patriotic songs are rarely heard, a true love of country exists among the people, and is sure to be developed in the course of time.

Usually the music is rather minor in character. On a bare patch in front of a rude hut, by the light of a flickering torch, a group of dancers may often be seen.

The step is slow and measured, the feet keeping time to the music of a guitar which is playing sad and dreamy airs.

The fondness for amusement is apparent everywhere. Unfortunately, the desire of the people for recreation leads them into some very injurious pastimes. The Porto Ricans are addicted to all sorts of games of chance.



A ROADSIDE ORCHESTRA.

Gambling is not an uncommon habit. The desire to make a show, to dress well, and to live well leads some people to become professional gamblers.

Cockfighting is the national sport. This degrading amusement is quite universal in the island. Every town has connected with it a cockpit. The principal day for this amusement is Sunday. After attending service in the church the people go from the church

doors directly to the cock mains. It is a motley company of men and boys; some on cantering ponies, but more on foot; some with their cocks in baskets, more with the birds under their arms. A dozen cocks tied to stakes in the sidewalk is a familiar sight. They have been clipped about the head, they are well groomed, their spurs have been polished, and they are ready for the fray. The money that is lost and won in this brutalizing sport would go far to keep the families of the participants in food and clothing.

Bullfighting has never flourished in the island. In strong contrast to the other Spanish countries, it is rarely indulged in, and is the diversion only of the well-to-do. Cockfighting, on the other hand, comes within reach of the common toiler, upon whom it is most degrading in its influence. Generation after generation of boys and young men — women have no part in the sport — grow up with a passion for the disgusting amusement. It does not seem to have occurred to the people that it is either brutal or debasing. As was to be expected, one of the first things the United States did after taking possession of the island was to prohibit cockfighting. It is to be hoped that in coming years the sport will be entirely banished.

The festivals of the church are national gala days. Especially is this true of St. John's Eve, June 27, and the days preceding. The festivities of the midsummer time last for more than two weeks, a special programme being arranged for each day and evening. In preparation for the great parade, to be held on the day specially devoted to the patron saint of San Juan, hundreds of people bring their horses to the city. At ten o'clock on

the morning of the appointed day a procession of men, women and children on horseback, all in fantastic dress, passes through the streets. Flags are waved, and banners swing in the breeze. Social distinctions are forgotten. The air is filled with pellets of lime and plaster, called confetti, and there is continuous applause.

The procession makes its way to the government house, where a burlesque proclamation is read by the chief man of the crowd. The more nonsense this announcement contains, the more the people shout and cheer. Then the "Merry Maskers" appear and try to deceive their friends as to who they are. The authorities publish a decree requiring order, but no one takes any notice of it. Those who do not wholly disguise themselves appear on the street in fancy costume.

At night bonfires are kindled on the corners of the streets. It is a time for all kinds of jokes. Men and boys on horseback make fun of those who cannot or do not ride, and they are answered in similar vein. For three days all the houses are thrown open. Lemonade and other refreshing drinks are offered to all who are thirsty. People with masks and without enter freely into these open houses, but no property is ever disturbed.

In connection with the St. John festival is held that most beautiful entertainment, known as the Feast of Flowers. This comes to the island from the Europe of mediæval times, and very probably it might be traced even farther back, to the days of ancient Greece.

At one of the Greek festivals a poetical contest was always held, and the victor was crowned with a laurel wreath, the highest honor that any Greek could attain. The contest at the Porto Rican Feast of Flowers is

somewhat similar. A month or two before the appointed day a committee chosen for that purpose announces the subjects upon which poems may be written. The contest is open to any one in the island, the poems to be



THE PICKANINNIES' DINNER PARTY.

written in Spanish. In 1901 the three topics selected were Country, Woman, and Love.

The successful rhymes are printed in all the papers and are read aloud on the festal day, and to their writers prizes are given. To the writer of the finest poem of all is presented a natural rose. The lady upon whom he bestows this rose becomes queen of the feast.

She sits upon a flowery throne from which she distributes all other prizes. Her commands are implicitly obeyed, and she is for one day a genuine Queen of the Flowers. The prize awarded for the second best poem is a rose of gold; the third in rank is rewarded with a rose of silver. The Flower Feast is the most charming occasion of the St. John carnival, even though it may lack the boisterousness of the midsummer day's revels.

St. Peter's Day and carnival bring their own festivities. Dressed in grotesque fashion, people go from house to house, filling the air with music of a more or less absurd character. Masked balls are given. Ridicule of everybody and everything is regarded as allowable. The man who plays the fool, and is the best clown, is most in demand at these festival times.

The negroes are very boisterous in their antics. They romp and caper and contort their bodies into all sorts of shapes. The "cake walk" is a mild performance compared with the pranks of these people. Their gayety lasts for several days, and ceases only when the participants have exhausted all new forms of amusement and are completely tired out.

The people of Porto Rico are especially partial to the drama; nearly every town has its theater. Sunday is the great holiday. After the morning service is over the rest of the day is given to amusement, and all kinds of pastimes are indulged in.

Vigorous out-of-door sports and games, such as baseball, which the boys of the United States are accustomed to play, were formerly unknown in Porto Rico. Since the American occupation, however, this game has become very popular with the islanders, in spite of

the warm, enervating climate. In heat such that no American boy would think he could do anything requiring more active exercise than "playing knife," a group of Porto Rican youth may now-a-days often be seen wholly engrossed in a game of baseball. It speaks well for the future of the island that her young men are so deeply interested in this invigorating form of athletics. Like the youth of other countries, they are much in need of such sports to aid in better physical development.

The children of the island have few games. When at play they skip aimlessly about with no apparent plan. Few of them have heard of such common games as leapfrog and hide-and-peek. Many of the children of the poorer classes have hardly even seen a doll. The simple materials supplied by the Insular government in connection with school work, such as pencils, rulers and blackboard crayons, have for these little folks very great attraction. That learning to write should be a pleasure, because of the novelty of marking with a lead pencil, is something that the child of the United States, who has played with pencil and paper ever since he can remember, is hardly able to comprehend.



CHAPTER V.

MOUNTAINS, PLAINS, AND CAVES.

THE mountains with which we are most familiar are elevations of soil or rock upon the land, where they serve numerous uses to mankind. They mark boundaries be-

tween countries, they influence climate, they cause rainfall. Among them rivers rise, and out of them metals are brought. We measure their height in feet above the sea level.

There are lofty mountains beneath the surface of the sea, also. They may be single peaks or mountain ranges, and often between them are deep valleys. The islands forming the West Indies are the fertile uplands of a long mountain range rising from the depths of the ocean.

Some of the submarine mountains are higher than any mountains we have upon the land. The average elevation of the Himalayas is about 18,000 feet. The highest single mountain in Europe, Mont Blanc, is 15,782 feet, while some of the mountains forming the West Indies are 27,000 feet from submarine base to summit. Asia is the only continent with mountain peaks that can surpass them. Mount Everest, towering to the magnificent height of 29,000 feet, eclipses the mountains of the tropical West Indies, hidden, as their bases are, 25,000 feet beneath the surface of the ocean.

A little to the north of Porto Rico lies a vast ocean valley. It is known as Bronson's Deep, and until recently was supposed to be the lowest point on the earth's surface. Soundings have been made to a depth of more than five miles. In other words, if a giant could take Pike's Peak from Colorado and throw it into Bronson's Deep, there would still be room for Mount Washington and several smaller hills on top.

What stately mountain peaks must lie below the blue surface of the Atlantic along the course of the submarine ranges! What Alpine steeps! What precipices and natural walls! The wonders of mountain scenery below the

surface of the sea recall to our minds the question of the Almighty: "Hast thou entered into the springs of the sea? Or hast thou walked in the recesses of the deep?"



A SHARP TURN ON THE MOUNTAIN SIDE NEAR GUAYAMA.

Compared with the great mountain called Porto Rico, the mountains on the island itself — which are really the very tallest peaks of the large ocean mountain — seem small. Several of them are actually, however, of

considerable height. El Yunque is 3609 feet above sea level. These mountains are made up of volcanic rock and are surrounded by a narrow belt of limestone hills. From a distance they resemble in appearance the Green Mountains of Vermont, although they are not so high. Mount Mansfield, the highest peak of the Green Mountains, is a thousand feet higher than El Yunque.

The long mountain range extending across the island is called a *cordillera*, a name which is given to any continuous and unbroken range. The main chain of peaks extends from Mayaguez, on the west, through the upland regions of Adjuntas, to Aibonito, the highest town on the military road. From Aibonito westward, the range is called the Central Cordillera; east of Aibonito, the Sierra de Cayey.

Near the middle of the island a second range branches off from the main cordillera, and running in a southeasterly direction forms two mountain chains in the eastern portion of the island. The northern extension of this range, the Sierra Luquillo, extends from near Caguas to the northeast coast of the island. Other mountains worthy of note are El Asomante, near Aibonito; Cerro de Guilarte and Las Sillas de Calderon, near Adjuntas; Las Tetas de Cerro Gordo, in San German; and Cerro Montuoso, near Mayaguez.

On the north coast is a series of hills called by the islanders "pepinos" or cucumbers. They rise to a height of about twelve hundred feet; they are sharp and, in some cases, flattened at the summit; and thus they bear a fanciful resemblance to cucumbers.

Porto Rico is so small an island that the rivers rising

high up in the mountains flow to the sea swiftly, and with great force. As they rush down they carry with them soil from the mountain sides. This soil is left near the coast as fan-shaped deposits called "playa plains." The handle of the fan extends towards the mountains, the broad, open portion towards the sea. These playa, or coast plains, stand only a few feet above ocean level. Several of the Porto Rican cities are built on the inner border of the playa plains. Similar land formations are found in Texas, Arizona, and New Mexico. In these sections they are produced by evaporation in the broad level plains, where water has collected after severe rains. Ponce is situated on one of the most noted playa plains, its port being known as the Playa of Ponce. At first sight these plains look like deserts, the limestone surface extending in long unbroken tracts, in striking contrast to the luxuriant hills beyond.

Between the foothills and the central ranges of mountains are "parting-valleys." As the rivers make their way from the interior, they wear away broad channels and form these long valleys. Indian corn is grown with great success in the valley soil. The lagoon of Guanica is in one of the parting-valleys. It lies between the *cerros* and the hills which separate it from the sea.

Mr. R. T. Hill, of the United States Geological Survey, who has made a thorough study of the physical features of Porto Rico, finds no signs of recent volcanic action. He says that there are no craters, and that no belt of lava is exposed to view. Still, as the mountains are made up of volcanic rock and show signs of volcanic upheavals, there must have been active volcanoes on the island some time in the past.



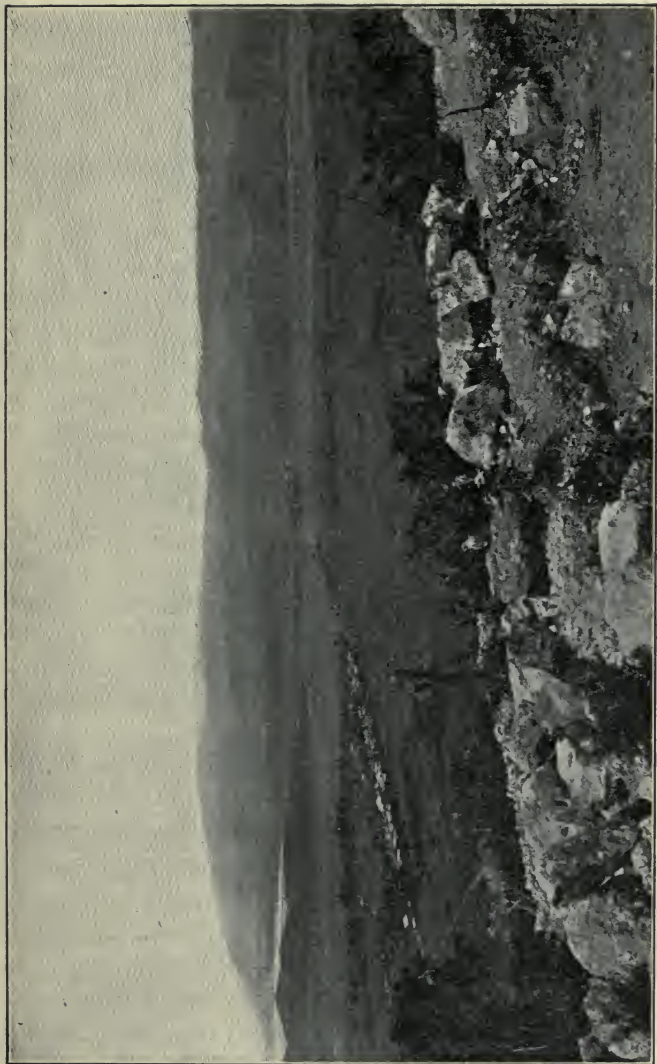
GUANICA, A VILLAGE ON THE SEACOAST.

Once upon a time, long ages ago, the scientists think, the land in the vicinity of the Caribbean Sea was much higher than it is to-day. It is believed that all the way from Florida to the mainland of South America there was a solid body of land. Probably there was no Isthmus of Panama in those days, but the waters of the Pacific Ocean washed the western side of this connecting body of land. Later, the land subsided, leaving Cuba, Haiti, Jamaica, Porto Rico, and afterwards the other islands of this region, above the sea.

Then came a long stretch of time, to be counted by ages rather than years, during which a deposit of limestone was made, lifting the West India Islands above the surface of the ocean. The mountain peaks came into shape, and craters were opened, which poured forth liquid lava. Another layer of limestone formed, like a crust, over the whole, and still later, coral polyyps built their dwellings upon the summits of the ridges covered with water. We find around nearly all the West India Islands a series of coral terraces, which reach some distance in from the shore.

Under the direction of our government, careful study will be made of the various soils in Porto Rico. Experts will experiment to find out what plants will thrive on the island, and how these may best be cultivated. By this means the farmers will learn how to raise larger crops, and of better quality, than can be obtained under the present conditions.

A trip to Porto Rico would be incomplete without a visit to one or more of the great caves to be found in the central and western portions of the island. As the underlying rock is limestone, cavities are to be expected.



THE PLAIN OF SANTA ISABEL.

They extend into the mountains horizontally, and are often very striking in their formation and coloring.

We will start for our trip to the caves from Caguas, twenty miles south of San Juan, and ride on our small Porto Rican ponies about halfway across the island to Aguas Buenas. We will take our breakfast in the barracks of Aguas Buenas, and then make our way to the cave itself. "Only an hour's ride," our Spanish guide tells us, but although in a straight line it is barely a mile, by the steep and winding trail it is rather a long journey.

As we wind slowly along the rough mountain trail the scenery is enchanting. The picture increases in beauty as we climb, especially when we turn to look on the hills and valleys behind us. A thousand feet below is the charming vale in which the busy city of Caguas lies. It is surrounded by great fields of sugar-cane, whose purple stalks stand out in contrast with the rich foliage of the hills. The groups of trees and vines are broken here and there by clusters of buildings with tall chimneys and rambling sheds—the sugar factories where the growers grind the cane-stalk and prepare it for trade.

A traveler thus describes the approach to Aguas Buenas, with its weather-worn and picturesque church :

"From the tower the early morning hour is struck in cracked tones, which reverberate among the houses of the scarcely awakened town, and float still farther out to the clustering thatched huts of the poor, clinging to the hillsides in defiance of the laws of gravitation. The cool morning air; the sky filled with fleecy clouds through which the slanting sunlight streams in moving patches over the surface of the landscape; the women

trudging with heavy loads of soiled linen on their heads to a near-by stream; the white-clothed, barefooted men astride of panniered, shambling ponies; the well-dressed planters and shopkeepers yawningly opening their closely barred windows, combine to make a new stage-setting, part Eastern, part Spanish, part Mexican, and, last of all, part American, for over many houses floats our decorative flag."

At last, after the "hour's ride," we go down a winding path and see before us a great opening in a wall of rock. This is not the principal entrance to the cave, but here we hitch our ponies to the calabash trees, and walk through the thick underbrush to a narrow gorge, where we approach a deep, yawning, black hole, the mouth of the "Dark Cave."

As we enter, the water dripping from the ceiling falls upon our heads. The top, bottom, and sides of the cave are limestone, and the dropping water holds this substance in solution, just as common salt can be dissolved in a glass of water. We turn instinctively to see where the drops come from, and to our surprise we observe them falling from what appear to be icicles hanging from the ceiling of the cave. Closer inspection shows that they are not really icicles, but the limestone itself, which is left behind by the dripping water in this form, the pendants growing a little larger every year, as each drop of water leaves its mite of limestone on the end. But not all the limestone in the drop of water is left on the pendant above. Similar "icicles" stand upward from the floor of the cave, and in the light of the torches these stalactites and stalagmites, as they are called, gleam with a whiteness like snow.

From the first gallery, which is a hundred yards long and fifteen or twenty feet high, we push forward into other chambers, where we are startled by the bats, whose fanning wings and hurried flight recall the sound of rushing waters. Deep holes seem to lead to an unknown world below. The guides tremble if one of us draws too near the edge to look over, or throws stones into the depths to listen to the hollow sounds that echo back.

After we have gone two miles into this great cavern, we return to explore another near by. Here the passageway winds in and out, and we enter great halls from paths over which we have crawled on hands and knees. Here are rocks, some dark and somber, while others, creamy white, gleam and sparkle in the flare of the torch. As we penetrate farther into the depths of the mountain, we hear the murmuring of a brook hundreds of feet below, we catch a glimpse of daylight here and there from the top of the tall domes, and finally we clamber out on the opposite side. After eight hours in such realms of darkness we are ready to welcome the sunlight and our nourishing luncheon of chicken, eggs, and rice.

The noted cave of Concejo, near Arecibo, is within a vertical rock three hundred feet high. Chamber beyond chamber tempts the explorer to keep going farther, but the slippery floor warns him meanwhile to take heed to his steps. The caves of Loiza, San Sebastian, and Manati are worth long journeys to see. In their gorgeous colors and mazy windings they remind the visitor of Mammoth Cave in Kentucky, although they are insignificant in size, as compared with the latter. Mammoth Cave is

forty miles long, while not one of these is more than two.

It is only in recent years that men of science have explored these Porto Rican caves with any attempt at thoroughness. They have found there, however, certain treasures rarely seen elsewhere in either North or South America. These are pieces of bones and skulls and one complete skull bone of the people who first inhabited the island. The skulls are of special interest, since they reveal a peculiar custom practiced by these people, and left for us to discover, so many years after they are dead and gone. Experts who have studied them tell us that the skull bones show, from their queer, pointed shape, that some of the babies must have had their heads bound, just as the Chinese bind the feet of little girls to-day. Only the boy babies' heads were thus bound, and probably not all of them. Why this cruel torture was practiced, to make the heads of certain men long and pointed, we can only guess. Were the children of the chiefs thus deformed, to distinguish them from the people of lower rank? Were those destined to be warriors selected, that by their hideousness they might strike terror into the hearts of their enemies? What it was for we shall probably never know; there is simply one misshapen skull, with pieces of several others, to tell us of the savagery of a people of whose existence Porto Rico shows hardly another trace.

CHAPTER VI.

RIVERS AND SOIL.

AN area of thirty-six hundred square miles and thirteen hundred rivers and streams! This is the proportion in Porto Rico. Where on the earth's surface shall we find its equal? As the island is not large, its rivers must necessarily be short, but what they lack in length they make up in numbers. The mountains are the fountain head of many rivers, the majority of which flow northward and southward. This is due to the fact that the mountain ranges run east and west, lengthwise with the island. As they are one third nearer the southern than the northern coast, the rivers flowing northward are one third longer than those flowing south. The mountain slopes north and south are deeply cut by the rapid streams, giving most of the interior a steep, hilly surface. Owing to the suddenness of these descents and the dryness of the earth, especially on the south side, much of the water runs off without irrigating the soil. The rivers gather quickly and flow rapidly, finding their way to the sea in a very short time. This gives them a larger volume than in countries where the rise of the ground from the sea towards the interior is gradual.

Seventeen rivers springing from the mountains flow northward and empty into the Atlantic Ocean. Unlike the rivers of the United States, those of Porto Rico are, on the whole, narrow. Few of them are more than two hundred feet in width, and most of them have an average depth of from two to four feet. Some of

these, however, are streams of comparatively large size. A few of them are navigable for a considerable distance above their mouths. The Arecibo, for instance, will admit vessels of ordinary draft to within fifteen miles of its source. But in a majority of cases the rivers of the northern side allow of little commerce with the interior. Across the entrance to several of them are sand bars, washed up by the rough sea, which present another obstacle to navigation.

The rains, which are very abundant on the northern side of the island, often cause the rivers to overflow their banks. The floods that result do great injury to the crops. As the rains are less frequent south of the mountain divide, the rivers on this side are not so richly supplied with water. Yet the streams of the south are never wholly dried up, although often no rain falls for ten months at a time.

Of the rivers flowing into the Atlantic, the Loiza, though not navigable for so long a distance as the Arecibo, is the largest. Because of its size it has been called the Rio Grande de Loiza. It rises in the Sierra de Cayey in Guayama, flows northwest and then northeast, gathering the waters of numerous smaller streams along the way, and empties into the Atlantic at the port of Loiza. At Carolina, fifteen miles from the mouth, its surface width is 220 feet, its depth three feet.

The Plata, which rises in the same mountain heights, is nearly as long as the Loiza. It drains the rich tobacco fields of Cayey and Aibonito, takes a northerly direction, and, passing through Toa Alta and Bayamón, empties into the Atlantic near Dorado, ten miles west of San Juan.

The east fork of the Arecibo rises in the ravines of the great divide. The west branch begins its course near Adjuntas. The two branches unite a few miles above Utuado and then flow slightly northwest. The stream is enlarged by the Tanama, which, increased by three branches, continues to Arecibo, where it enters the sea.

The Manati, rising in the Sierra Grande which surrounds the mountain town of Barros, passes on its northward way Manati and Barceloneta, and empties into the ocean at Point Boquilla.

The Bayamón rises in the high mountains of the interior, flows almost due north, and empties into the bay of San Juan. The town of Bayamón is situated on this river. The Rio Piedras is a stream of lesser size. It also empties into the bay of San Juan.

Two mountain streams, one rising near Corozal and the other near Morovis, flowing northward, unite and form the river Morovis, which empties into the Atlantic about fifteen miles west of San Juan.

Of the sixteen rivers that empty into the Caribbean Sea, three may be mentioned. The Coamo passes between the Sierra Grande on the west and the ridges of Coamo on the east. It flows near the town of that name, and empties into the sea east of Coamo Point. West of the Sierra de Cayey and east of the Coamo Mountains flows the Salinas, in a southwesterly direction to the sea. The Jacaguas, or Juan Diaz, pursues a southwesterly course from its source on the southern slopes of the higher mountains. Passing under the great military road at Juana Diaz, it empties into the sea a few miles east of Ponce. The rivers of the north differ from those of the

south in the abundance of delicious fish which they produce.

There are but three rivers of importance which empty into the Mona Passage on the west coast. The first of



A MILL FOR GRINDING CORN.

these, the Mayaguez, is a short but useful river, which reaches the sea near the city of the same name. A few miles southward is the Guanajibo, which flows between the broken ridges of the Lares Mountains on the

north and Torre Hill on the south. One branch encircles Cerro Montuoso, another the Tetas de Cerro Gordo Mountains. Three towns lie along the banks of this river and its affluents,—Sabana Grande, San German, and Hormigueros. The Añasco River rises among the Lares summits; its northern branch, called the Prieto, is long and winding, taking its rise in the fastnesses of Cerro de Guilarte, one of the loftiest mountains in western Porto Rico. The Prieto flows through Las Marias, then into, and becomes a part of, the Añasco, upon whose banks is the town of the same name. Its mouth is about five miles north of Mayaguez.

Compared with the rivers of the northern coast those of the eastern are small and limited in commercial value. The principal ones are Fajardo, Guayanes, and Humacao. Not one of them is navigable except for small craft, and yet they drain a country wonderfully fertile.

If we should make a journey around the coast, we should find forty-six rivers emptying into the sea, one every eight miles. Aside from the rivers are countless rivulets and streams.

The value to Porto Rico of its rivers cannot be told. They hold the secret of much of its agricultural wealth. Its fertility will never diminish as long as its water supply is wisely used. But it is a historical fact that the rivers and water courses of the island have never been turned to the best account for the purposes of commerce. For example, between the Arecibo and the Manati rivers there is a fresh-water lagoon six miles long and parallel with the Atlantic Ocean. Communication between this lake and these two rivers might be

made at small expense. This would open the way for free intercourse between the rivers and the valleys through which they flow. It would make business brisker and increase prosperity.

Scattered here and there over the island are some eight bodies of water of sufficient size to be called lakes. The two largest are Lake Guanica in the south, and Lake Martin Piña in the north. Several lagoons are to be found near the coast, the principal one being that on the northern border of Arecibo, to which reference has already been made. Picturesque cascades are the Salto de los Morones near Adjuntas, and the falls of Santa Alta in Bayamón. There are also mineral and hot springs, such as those of Coamo and Quintana.

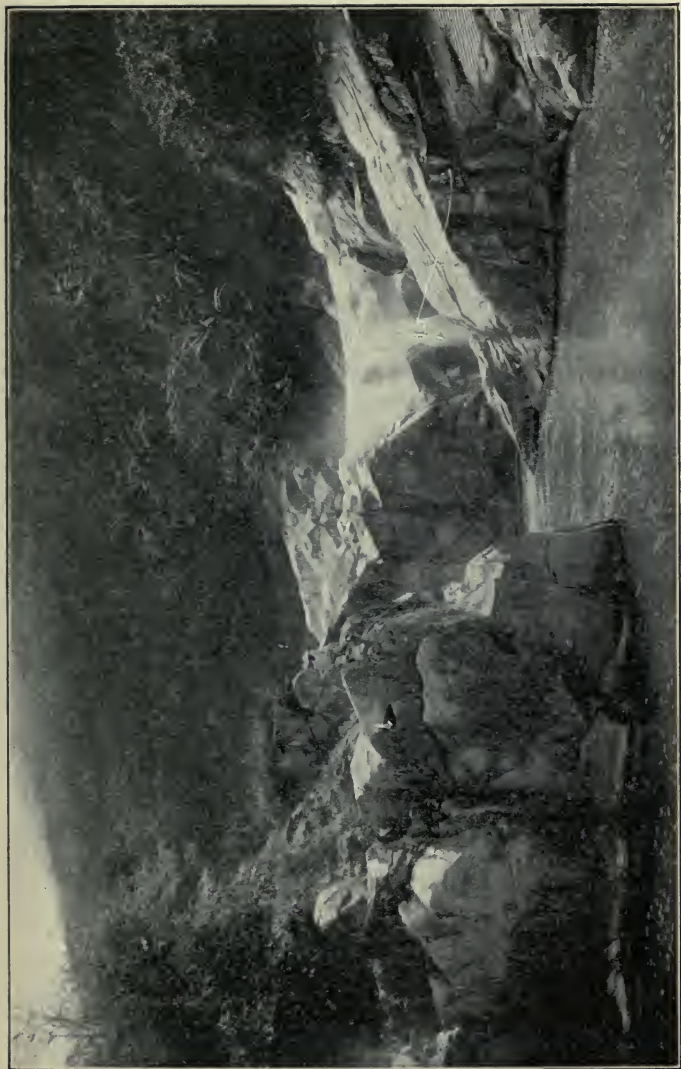
A word picture of Porto Rican water scenes is given by Mr. William Dinwiddie. "In the western half of the island," he says, "one sees from dizzy mountain trails exquisite sunlit falls, dropping in silver threads for two hundred feet over steep rock precipices, hidden in places in their descent by giant ferns and clusters of flowering plants. From the depths of the huge ravines rises the sound of tumbling water, but the rivers are hidden from sight by the mass of tropical growth. By toiling down steep-sided hills, clinging to the thick-grown coffee bushes, step by step, one is at last rewarded by a vision of curling falls and boiling waters, embowered in arches of unfamiliar trees and pendent vines, which fills the soul of a lover of nature with thrills of joy. These streams give to the rural inhabitants an abundance of fresh water; from them, also, might be obtained power for running machinery, for while they do at times become raging torrents, they never fall below a

certain level. Again, much of the wonderful fertility of the lowlands is due to the overflowing freshets, which, several times a year, deposit a mountain-gathered load of rich soil."

One of the advantages which will result from American control in Porto Rico will be improved methods of irrigation. By building reservoirs and aqueducts, and by connecting the river courses by means of canals, much of the water that now rushes to the sea and is wasted may be used to enrich the soil.

Whatever plans are put in operation by American enterprise, we must remember that science has already done much for Porto Rico. The road builder, the bridge maker, the fruit raiser and the grain producer have been at work. The Spaniards have constructed many irrigating ditches of moderate size. The low playa lands between Guayama and Ponce yield good sugar-cane crops by this means of irrigation. The thick, heavy growth is the result of the artificial supply of water. The only trouble is that irrigation is so little employed in the island.

The abundant rainfall provides water sufficient for three fourths of the island. The remaining fourth, which consists of some eight hundred miles of dry soil along the coast, can, by artificial watering, be made to blossom like the rose. Certain tracts of land that have been deemed useless for purposes of cultivation, will yield rich harvests when made to feel the touch of great rivers. The playa lands can be made, by proper methods of irrigation, to yield double the present crop of bananas, cocoanuts, and sugar-cane. Of the four hundred and fifty miles included in what is called "the



FALLS OF THE MORONES.

southern back coast border," nearly a quarter of the territory could be made to add to the wealth of the island if irrigation were rightly applied.

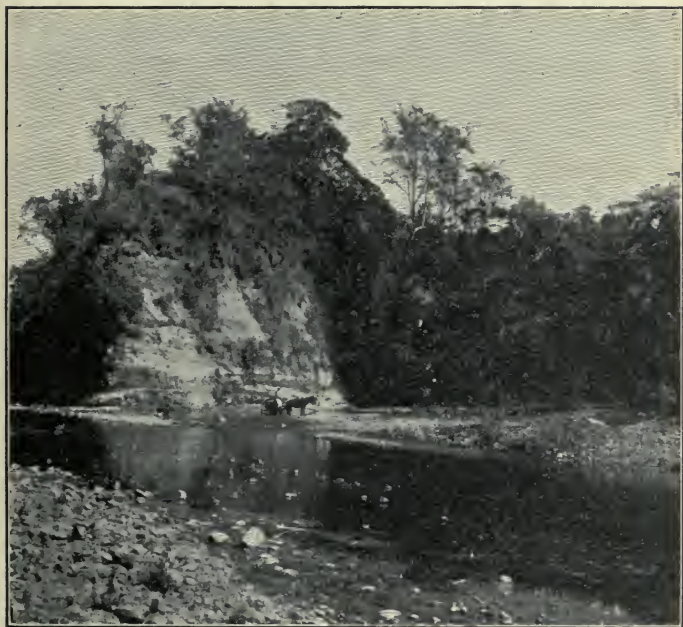
Porto Rico has so great an amount of water in its fertile portions that it can spare enough to enrich the needy sections. By tapping some of the well-filled streams and turning them into shallow channels, the dry places can be watered. During the rainy season the flood discharges of the larger streams occur at frequent intervals. Little of this water need be lost. Large storage reservoirs might be constructed in the valleys, and connection be made between them and the dry soil of the foothills.

For many years the inhabitants of the island have watered their fields from irrigating canals. The most advanced modern science has not improved on these canals as regards durability, for many of them are as serviceable to-day as when they were constructed, perhaps two centuries ago. Our methods of irrigating, employed in California and elsewhere, are, however, more economical in the use of water. When the Porto Ricans learn, as they certainly will very soon, how to take advantage of the possibilities in this direction, the most difficult of the agricultural problems will have been solved.

Much of the soil along the southwestern coast responds readily to irrigation. The surface soil is a rich, earthy loam, with a subsoil of an open, porous limestone, which supplies excellent drainage. The land is at present largely under cultivation in maize, beans, pease, cassava, and other vegetables. Fruits of various kinds grow finely in such soil.

The soil of the mountains is a dark red clay. That

of the foothills is white limestone which abounds from Florida southward, though it is seldom found in the United States. Vegetation takes deep root in the rich red mountain soil. But this same clay soil, when sticky and wet, is a terror to the farmer carrying his produce



THE COAMO RIVER.

to market. It resembles in color the clay regions of the Appalachian Mountain system, and is made of black volcanic rocks. The color is due to the iron which it contains. The constant action of the moisture and heat causes this rock formation to decay, and thus to become a fertile soil.

The playa soil, found along the coast, consists of a red loam washed down by the rapidly flowing rivers. In the southwestern portion of the island the soil is blacker, and contains considerable lime. It is suitable for growing sugar-cane.

Owing to long-continued cultivation, much of the soil of Porto Rico has become exhausted, so that it has in many places been abandoned or is allowed to remain idle. No fertilizers have been applied to give it the old-time richness. This is especially the case on the north side of the island. Near Carolina and Rio Grande are deserted sugar estates. In the vicinity of Lares and Adjuntas many abandoned fields are to be seen.



CHAPTER VII.

CLIMATE, RAINFALL, HURRICANES.

WE are accustomed to think that the farther south a certain locality is, the warmer it must be. Because Porto Rico is in the same latitude as the Desert of Sahara, Vera Cruz, Rangoon, and Bombay, it seems to one living farther north that it must be almost unbearably hot. Of course the climate of the island is tropical, and on the coast it is very warm. The mountains do much towards varying the atmosphere, however, and in the interior the air is cool and healthful. At Ponce, for example, the heat is intense, but back among the hills at Adjuntas the atmosphere is really bracing. The word *climate* originally meant a slant or incline, and thus it referred to mountain slopes which cause changes in the

atmosphere, and so bring heat or cold, dryness or dampness.

The variation in temperature between the coast and the interior of the island is not caused wholly by the difference in elevation, but is in part due to the aid which great heights give in condensing moisture and bringing rain to cool the air.

Lying well within the circle of the tropics, the island is in the direction of the southwest trade winds, which blow with great regularity and cool the air to a considerable extent. The Cape Verd Islands, the Hawaiian Islands, and the Philippines are on nearly the same parallel as Porto Rico. Each locality has its peculiarities and its charms, but for a place of residence or resort none of them can surpass this garden spot of the West Indies.

To Americans planning to visit the island, the question of climate is a very important one. The future of this land of sunshine, as an American possession, bears directly upon its healthfulness for people from farther north. From November to March the climate is almost ideal. This is called the winter season, although there is neither snow nor frost. There are occasional showers, but they are most common at night. The trade winds blow from the east, northeast, or southeast, making the air fresh and invigorating. During the months from April to about October the air is warmer, the heat more continuous, the rains more frequent and of longer duration. The heat and rain together produce great moisture, especially along the coast.

If we plan to spend a week in San Juan, or Arecibo, or Ponce, it had best be during the winter season. But

whatever the time of year, such mountainous centers as Adjuntas, Lares, and Cayey are most delightful towns to visit. As places of refuge from the heat of the coast they are paradise itself. Passing from a temperature of



COCOA PALMS.

90° to one of 60° is an easy step in Porto Rico.

Many people have considered that the climate of the island is unhealthy. This is due to an unwise choice of the season for trying it, too rash indulgence in tropical fruits, or a general disregard of the laws of health. Walking on the sunny side of a street in Ponce on a

July day is something that no native would venture to attempt. The rainy season tries any constitution used to a northern climate. As a result, malarial diseases have, in many cases, been produced. Care in selecting

a healthful locality and eating proper food make traveling in Porto Rico a delight.

The sudden change from glaring sunlight to dense shade is so great that it often produces injurious effects. It cools the blood so quickly that pneumonia occasionally results, or some fatal disease of the lungs.

In the summer season heavy rains may be expected. The water falls, not in showers, but in sheets. The rains begin in May, and gradually increase in volume until the middle of August, when they are at their height. It sometimes seems as if everything would be deluged. Occasionally the sound of thunder gives warning of the coming downpour. When it arrives there is no describing the magnitude of the shower. It "rains daggers with their points downward." Every object disappears from view. In twenty minutes one seems to be surrounded by a lake. Among the mountains the torrents rush into the rivers, fill them to overflowing, tear down the slopes and flood the plains below.

The trade winds blow across the island from the east or southeast during the entire year. These refreshing breezes are actually felt only along the coast and a short distance inland, but their effects may be seen far back in the interior. The mango and palm trees of San Juan, which are exposed to the force of the north wind, bend towards the south. They yield to the pressure of these steady air currents, somewhat as the trees of Southern California bend eastward, in the direction of the prevailing winds that come from the Pacific.

These trade winds, blowing from the warm ocean, strike the mountain summits, which cool them quickly and condense the moisture into rain. As they keep on

farther to the south and west they bring more rain at the mountain summits near the center of the island. When the mountains are passed the clouds are thin and scattering, so that little rain falls on the island's southern side.

Porto Rico is sometimes visited by severe hurricanes. They do not come very frequently, however. Since Columbus's day only seven disastrous hurricanes have been recorded. The island is so small that the effects of a hurricane are very apparent, and thus the storms are dreaded more than they deserve to be.

The first hurricane of historic interest in Porto Rico occurred in 1515. In 1678 an English fleet, anchored off San Juan, was partly destroyed, just as its admiral had commanded the surrender of the city fortifications. In 1702 a Porto Rican squadron was wrecked as it was about to sail from the harbor to attack an English fleet. The most violent hurricane of the eighteenth century was that of 1772, when the ruin of houses, the destruction of trees, plantations, and crops, and the loss of life, were enormous.

When the Empress Josephine, wife of Napoleon Bonaparte, was three years old, a hurricane visited Martinique, her birthplace. The house in which she lived was destroyed. Her father and mother, with their three daughters, fled to a cave or covered structure built for shelter at such a time. After hours spent in this suffocating place they went out, only to find their sugar plantation in ruins. During the next ten years "the pretty creole," as her friends called her, lived in the upper rooms of an old sugar mill whose walls are still standing. A few years later Josephine was married and

went to live in France, but that hurricane was something she never forgot.

One year after the American forces took possession of Porto Rico, August 8, 1899, a most destructive hurricane visited the island. The eastern and southern coasts lay in its deadly course. The resulting disaster has affected the industrial progress ever since. Humacao was laid low; Yabucoa was left a heap of ruins. Little remained of the old town and port of Arroyo excepting scattered débris. During this terrible storm the great military road between San Juan and Ponce was damaged to the extent of \$150,000.

At Ponce and the port of Ponce great injury was done. The streets were flooded, the dwellings overturned. The coffee and sugar-cane crops were ruined. Fruit trees were torn up by the roots, and the orange, banana, and lemon industries were crippled. On the northern coast nearly three thousand persons lost their lives, and cattle were killed by the thousand. At Juana Diaz, near Ponce, rain fell to the enormous amount of 11.20 inches in twenty-four hours.

Some idea of the terrible damage done to the crops can be gathered from the report made January 15, 1900, by General George W. Davis, Military Governor of Porto Rico. The coffee crop, General Davis states, is sold at from seven to nine million dollars a year. The berries were just ripening when the storm came, and instead of gathering five million pounds of coffee, the growers had only three million pounds, and that of poor quality. In a normal year the sugar crop yields a return of twelve million dollars. The hurricane reduced it in 1899 to three million dollars.

It is likely to be many years before there is such a hurricane again. If we make our visit to the island at the most enjoyable season, we need have no fear, for these storms usually occur in August or September.

Professor Mark W. Harrington, of the United States Weather Bureau, who has made a study of Porto Rican weather conditions on the ground, divides the island into a wet and dry belt, the central Cordillera serving as the dividing line. The north side is wet and the south side dry. The greatest rainfall is on El Yunque, where it amounts to 120 inches a year. On the south side, from Guayama to Cabo Rojo, the climate is drier, but most of the island is wet, as compared with the average amount of rain in the United States. The mountains are constantly covered with moisture, either by daily rainfalls or dense mists which collect upon them at night, except upon the lower portion of their southern slopes. Hence it may be said that the surface is never dry and the subsoil in the mountain region is kept constantly moist.

Under Spanish rule, weather observations were neither accurate nor complete. Our officials have established weather stations in different parts of the island, and monthly reports are published by the Weather Bureau of the United States Department of Agriculture. The work is divided into the Climate and Crop Service. Daily records are made from thirty-four stations, including one on the island of Vieques. These records are sent to the central office at San Juan, where the monthly reports are prepared and then forwarded to Washington.

The weather records are based upon (1) temperature

in degrees Fahrenheit; (2) rainfall in inches; (3) sky; (4) wind. From tables showing data for 1899, the following facts are gleaned: The highest degree of temperature was 95° Fahrenheit. This is no warmer than our thermometers sometimes record in the northern part of the United States. The highest temperature was at Hacienda Perla, in the district of Humacao, July 31. The lowest temperature was at Adjuntas, December 24, the thermometer reading 40° Fahrenheit. The annual average temperature of the island, as taken from reports of these stations having records for ten or more months, was 76.6° .

The highest average temperature of the United States is 69° , and is reached in Florida and Louisiana. The other extreme is found in Wyoming, with a record of 41° , and New Hampshire, where the mean temperature is 42° .

The difference between the average summer and average winter temperature of any one place in Porto Rico is only a very few degrees, inducing a very uniform climate. The temperature in Washington, D.C., covers a range of 118° . The difference between day and night in Porto Rico is only ten or fifteen degrees. The air is seldom sultry, though it is often damp and chilly.

The greatest local yearly rainfall, in 1899, 140.06 inches, was at Hacienda Perla; the least, 59.29 inches, was at Isabela. The former of these localities is inland, 460 feet above the sea level; the latter is near the northern coast, 240 feet above the sea.

The United States Government issues a "Weekly Crop Bulletin." These bulletins are printed in English and Spanish, and they serve to acquaint the people

of the island with the exact weather conditions and the state of the crops. A specimen selection is taken from the bulletin for a single week in July:

“Heavy showers have fallen during the week in portions of the districts of Aguadilla, Cayey, Humacao, and San Juan de Puerto Rico. In other districts the rainfall has been general, but light.

“High winds, accompanying thunderstorms, have prevailed, but no damage to vegetation is reported.

“Minor products are reported in good condition, and corn, beans and rice are abundant. Land for tobacco and seedplots is being prepared, but with little activity.

“A crop of oats which was sowed near Humacao, as an experiment, is reported as a failure, rust having taken place on account of the damp weather. The report made last week concerning the favorable condition of coffee in the vicinity of Sabana Grande was an error, the correspondent making a correction in his report this week, stating that the berry is in very bad condition.

“Stations reporting two inches or more of rainfall during the week are Hacienda Coloso, 2.62 inches; San Lorenzo, 2.30 inches; Humacao, 2.46 inches; and Weikato, 2.13 inches.”



CHAPTER VIII.

THE THREE GREAT STAPLES.

FOR centuries there has been a saying, “No one goes hungry in Porto Rico.” The truthfulness of this proverb is borne out when we remember that for three hundred years the island has supported a dense population by the products of its soil. The larger portion of the island produces some grain or fruit or cereal, only small sections remaining in their natural state.

To the American entering upon this new possession the question is not, what has the island produced in the past, but what can it be made to produce in the future? The general opinion is that its products are the finest in the West Indies, and that it will yield more to the acre, and in greater variety, than any of its neighbors.

It is, however, a mistake to suppose that the soil brings forth its fruits as by magic and without careful tillage. The fertility of the soil is so great that it needs the application of the laws of agriculture in a most thoroughly scientific manner, that there may be an adequate yield and no waste. Some parts of the island can produce far more than they do now, and others should be given a rest, or a change, which is rest.

The products of Porto Rico are in general those of the entire West Indies, where tropical fruits grow luxuriantly. In a land where snow or frost dare not touch a living thing,—shrub, vine, tender shoot, or delicate flower,—sun, soil, and rain unite to produce marvelous results. One may see a cane field five miles square, or a tobacco patch covering the whole side of a mountain from base to summit. According to the returns of 1899, 81 out of 289 sugar-cane plantations are not under cultivation. During the last twenty years there has been a decline of fifty per cent. in the production of sugar. There are 60,953 owners of sugar-cane plantations. Aside from the territory where the great staples are cultivated, there are on the island 22,000 farms of moderate size, devoted to small fruits and miscellaneous products. Go in any direction, from playa land to forest line, from mountain base to mountain summit, from river bank to rolling plain, and you find soil that

can be cultivated. Whatever the soil is given to do, it does right royally. Porto Rico is the only island of the West Indies which can produce sufficient food for its own support and provide a large margin for export.

SUGAR.

Sugar culture was imported into Porto Rico from the Canary Isles three hundred years ago. The plantations range in size from small plots up to seven hundred, eight hundred, and even one thousand acres. The tendency has been in recent years to decrease the number of plantations and increase the size.

The pictures of sugar-cane in the geographies give us an impression that sugar is, and must be, raised much like our corn or maize. When we get to Porto Rico, we find that the sugar plantations there are in reality very different from the corn fields of the United States. If we reach the island some time between October and December, we shall be there in time to see the planting going on. The exact time of planting each field depends upon the dryness of the soil.

We will go out to one of the finest plantations, near a foothill of the southern border of the island, and there observe just what is done. The thrifty owner has separated his fields into oblong patches, with roads or pathways marking the division lines. The cane is planted in hills, four feet apart. Instead of dropping kernels or seeds into the hills, as we do to raise corn, cuttings are set in the ground. The two upper joints are detached from the stalk of cane, and these slips are set in the furrows made by the plow. Two slips are planted together, ten inches deep. The top of each shoot is left

above the soil, about an inch of the green tips showing. When once well planted, the cane will take care of itself for ten or a dozen years, since the roots send up *retoños* or shoots. In other words, the sugar-cane replants itself. The most enterprising farmers replant, however, once in every four or five years.



CLEARING A CANE FIELD.

The sugar-cane grows best in the thick, black soil of the southern coast. This soil is both the joy and the despair of the sugar-planter. It enriches his crop; but when the cane is piled on the large tip carts, to be hauled to market or the mill, it must be dragged through mud as heavy, as sticky, and as deep as California adobe after a rain.

The crop is gathered some time between January and May. An occasional stalk may be found as tall as

twenty feet, but the average height is from eight to ten feet. The weeds and grass are nearly as tall. The sugar-cane has a critical moment when it is fully ripe. It must then be cut, or a part of its value is lost. The stalks have bloomed and have ceased to grow. The cane now contains a larger amount of sugar than it does at any other time.

Companies of men and boys assemble in the sweet-smelling fields. They cut the stalks down close to the ground, and chop them into lengths of some four or five feet.

Each stalk is cut separately by hand with a *machete*. This instrument, which is used in Porto Rico for many purposes, was invented for cutting cane. Its long, straight, sharp blade, slightly curved at the outer edge, is especially adapted to its purpose. The labor is performed by peons, whose wages average about fifty cents a day. A laborer will under no circumstances do more than one kind of work. If he is a cane loader, he will do nothing else. If his business is to hoe cane, he will do that only.

The stalks are tied into bundles, piled upon heavy ox teams, and carried to the mill. On the smaller plantations the mills are kept in motion by oxen or water, but the one we shall visit is more modern, and is propelled by steam.

At the mill the sugar-cane is crushed between heavy rollers until all the juice is squeezed out. The juice is boiled, put into basins to cool, and there it becomes sugar. After cooling, the sugar is placed in hogsheads with holes in the bottom, from which some of the juice drips. The thick brown liquid which runs out through

these holes is molasses. The mass of brown sugar remaining is then treated with certain substances to turn it white, and after passing through a screen it becomes crystallized. The so-called molasses sugar is what is left after the molasses has been separated; this is refined into granulated sugar. Some cane sugar is brown and some white; some is soft and some hard; some is in the form of powder and some in lumps,— but it has all been molasses sugar, and it all came originally from the juice of the sugar-cane. It takes fifteen or sixteen tons of cane to make a ton of sugar.

Scattered about the lowlands may be seen clusters of buildings and long sheds, with a tall “factory” chimney

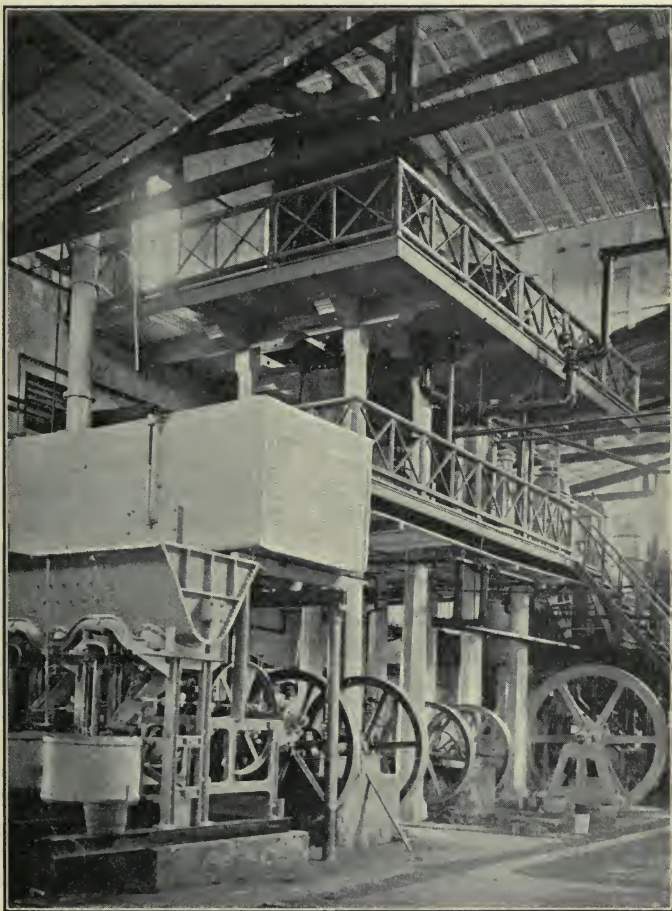


CLEARING A CANE FIELD WITH A HARROW.

rising from the midst. The process of turning the cane into sugar is carried on under these roofs. Some of the mills are supplied with the best of machinery and are built on an ample scale. Yet many of them are rude structures, with clumsy means for grinding the cane. Now that Porto Rico has come into American hands, the

finest machinery of the day will be put to work in developing the sugar industry. Steam railways and electric lines will connect the plantations with the ports. The day will probably come when the cane will be cut by machinery, conveyed to the mill by electricity, and with the aid of the most modern appliances the refining will be done quickly. As yet, improvements in the manufacture of sugar on the island have not kept pace with those in other sugar-producing lands. Increased production of sugar in other parts of the world, especially in the Hawaiian Islands, has brought about a fall in prices, causing some discouragement among the plantation owners. A modern sugar plantation, with the apparatus available for cultivating the cane, should cover two thousand acres, or a tract of land twenty times as large as a New England farm of average size.

Of all the industries in Porto Rico, sugar was the first to feel the impulse of American occupation, under which it has taken a new lease of life. With an up-to-date knowledge of chemistry and engineering, and with sufficient capital, the future of sugar raising is very bright. Already the tide is well turned. In place of the abandoned sugar mills and those wrecked by the hurricane of August, 1899, modern, well-equipped buildings are going up, and a new era has set in. One of the first steps will be to reclaim waste lands and relieve others of the strain to which they have been put. The planting of refineries in the sugar-producing localities, at and near the important ports, will give a new incentive to the industry. It is accepted as a general opinion that the yield of sugar in Porto Rico should be four times the present amount.



A SUGAR MILL IN MANATI.

Among the obstacles to be met with in the cultivation of sugar is a disease which attacks and ruins the stalk of the cane. Nor has a remedy yet been found for stopping the ravages among the young plants made by the *changa*, a kind of cricket. Then, too, continuous cultivation has weakened the soil. In 1879 the output of sugar was 170,060 tons; in 1896 it was less than half as much, in 1898 it was less than a third. When to these difficulties are added the fall in prices, with the cost of producing not decreased, the waste in methods of manufacture, the high rate of interest charged* on money loaned, and the fact that many Spaniards took away their capital after the war, it is no wonder that some of the planters have been somewhat disheartened.

COFFEE.

Rather a pleasing story is told of the introduction of coffee into the West Indies. Early in the eighteenth century the cultivation of the coffee tree was almost entirely controlled by the Dutch. In 1714, a citizen in high authority at Amsterdam presented King Louis XIV. of France with a single coffee plant. Cuttings from this tree were sent from France to Martinique. In those days the journey was long, and the supply of water on the ship became nearly exhausted. But the man in charge of the precious plants gave up half his share of the water each day to keep them from wilting, and when he reached Martinique they were safe and sound. The coffee found its way from there to Haiti and later to Porto Rico, so the Porto Rican coffee is descended from those plants in Martinique.

Coffee grows on a bush which reaches a height of

from ten to twelve feet. Several stems spring up from a single root. Branches shoot out from the main stem in pairs, bearing a slight resemblance, in arrangement, to fish bones. On these small branches the blossoms, and later the coffee beans, grow in bunches so close to the stem that they look as if they might have been fastened on with glue. The leaves are thick, dark, and glossy. The bushes are, in general appearance, similar to laurel. They are set in regular rows, and the graceful branches, with their trim green leaves, their snow-white flowers, and the fruit,—first green, then pink, and later a brilliant red,—form a most charming picture. The berry, when ripe, is not unlike a rather small cherry.

After the young tree has been growing for about four years it begins to bear. The yield is best after eight years' growth, though the berries are produced annually for upwards of twenty-five years. So a coffee plantation is as valuable a property as is a large apple orchard in the northern part of the United States.

The coffee plant is delicate and must be cultivated in the shade. Guava and mocha trees are set out to protect the plants from the burning rays of the sun. In many cases plantain and banana trees are used, especially during the early years of the growth of the coffee tree.

The berry is gathered during the winter months. In the early morning, any time between October and February, a father and mother with a bevy of ragged children, all coffee pickers, may be seen going forth to the task of the day. The taller branches are too high for the children to reach, and so are bent down and the berries picked by the men and women. The branches of medium height can be stripped by the larger children,

while the half-naked little tots gather from the bushes nearest the ground. The small baskets of berries are emptied into larger baskets or sacks.

At nightfall the busy toilers cease their work. The grown people carry away on their heads heavy baskets filled with the fruits of the day's labor, the little folks walk beside them with smaller baskets on their arms. A mother balancing a bundle of coffee on her head and holding in her arms a child too tired to walk is no uncommon sight. Footsore and weary, all reach the plantation and lay down the day's harvest, then go to their humble dwellings and prepare the evening meal. The next day follows with the same routine, and so it continues till the time of the gathering is passed.

The coffee is dried, at least on the great plantations, by being spread on large wooden trays which can be rolled under the coffee houses. In this way tiers of trays may be protected from sudden rain. Coffee spread out on burlap sacking in the public squares is a common sight among the smaller hill towns. After the berry is dried the husk is removed by crushing in large wooden mortars, the coffee bean being thus set free. The beans are washed, and are then placed in well-ventilated chambers in the drying house, where the coffee is thoroughly seasoned and made ready for shipment.

In the course of our visit to the island we shall frequently see half a dozen slow, patient mules doing heavy freight service. More often than not they are coming down the mountain slopes of the Central Cordilleras into the streets of Yauco, or Mayaguez, or some other town on the coast, carrying huge bags of coffee balanced across their backs. Or we may notice a cum-



A COFFEE PLANTATION IN ADJUNTAS.

bersome cart drawn over a rough trail by two yoke of oxen. In all cases the direction is towards the sea. The coffee is going to market.

Coffee is the most profitable agricultural product of Porto Rico. In many ways it is the most desirable crop for the island, whose inland regions are mountainous and can thus be utilized. Coffee grows best at an altitude above the sea of more than a thousand feet. It will yield five hundred pounds to the acre at a thousand feet, from six to eight hundred pounds from that altitude to twelve hundred feet, while with elevations above two thousand feet, from a thousand to twelve hundred pounds an acre are sometimes obtained. The higher up the mountains it is grown, the better the quality of coffee produced.

Porto Rican coffee has no superior in the markets of Europe. It is held in high favor by the people of Italy,

Cuba, and Spain. When shipped to Mediterranean ports a chemical is added which gives it a bluish tint. The best brand on the island comes from Yauco, a name which serves as the trade-mark of Porto Rican coffee. In the American market it ranks with Mocha and Java, often being sold under those names where ignorance of the real merits of "Yauco" coffee prevails.

In favorable years the coffee crop is worth from six to ten million dollars. The production per acre is three hundred pounds. A woman, expert in the art of picking, will earn sixty cents a day at this work, or thirty cents for each hundred pounds.

TOBACCO.

Tobacco is successfully grown only in a rich soil. As it weakens the productive power of the soil, the ground needs to be enriched each year by strong fertilizers. The great tobacco lands are in the Cayey district. These lands are not cultivated in large areas, but in small patches along the sides of the inland hills. The low-lying foothills near the valley levels and under the shadows of the more rugged mountains furnish good tobacco fields.

Between the months of July and November we may see on the rounded hillsides, in all parts of the island, little patches of tobacco seedlings where the plants are beginning to grow. Early in November the larger hills are stripped of their creeping vines and other plants and bushes, by groups of peasants dressed in white and armed with broad-edged hoes. It is said that as one passes over the great military highway this scene extends so nearly in all directions that the landscape

appears as a map, with people in white moving like mere specks over the various sections.

The tobacco leaf is ready for cutting by the middle or last of March. Through constant care and labor the weeds have been kept down, and the cutworms in their tiny cells have been destroyed. The leaves are gathered, carried to the drying houses or into long, low sheds on the hillsides, lengthwise with the slope. Forty days of drying make the tobacco ready for export. The work engages young and old; it gives employment to both men and women, as well as to boys and girls.

The sheds for drying tobacco are usually built of bamboo or palm. They are thatched or roofed with long palm leaves so arranged that there may be a free circulation of air. Sometimes the palm-leaf thatching is as much as a foot thick, to keep the rain from soaking through and spoiling the tobacco. Under the eaves, between the bamboo posts and the palm leaves, an open space is left on the gable ends of the long shed. The tobacco is dried on long poles which extend from one end of the shed to the other, just below the roof and on a line with the open spaces.

In preparation for drying, the tobacco leaves are cut from the stem in pairs, a piece of the stem sufficient to hold the two leaves together being cut for each pair. Pairs of the very largest leaves are hung over the poles one layer deep, as closely as they can be placed. On top of each pair of the large leaves a pair a little smaller is placed, then a still smaller pair on top of that, and so on, until the pile is a certain specified number of leaves deep. When the tobacco is dry each pile of leaves, comprising one pair of leaves of each size, is tied

up in a bundle by itself. A certain number of bundles makes a bale.

Before the leaves are hung on the poles to dry they are carefully picked over, all wormy or broken leaves being separated from the rest. The perfect leaves can be used for the outside layer of cigars, while the broken and wormy ones are suitable only for the inside.

In the estimation of the people, tobacco stands third in commercial value. As long ago as 1846 seven million pounds were shipped abroad. The highest figure of recent years was in 1880, when 12,188,000 pounds were raised in the island. In some years, as in 1896, the output fell off. The decrease in exportation is partly due to the large quantities of tobacco raised in Cuba and the fame of the Havana brand, and partly to the destructiveness of occasional hurricanes. It is believed that most of the crop of tobacco in Porto Rico will in coming years be brought to the United States.

Columbus is said to be the first European to see tobacco. He found it in Cuba, where the natives smoked it, rolling it up in tubes and inhaling the smoke through their nostrils. The Spanish government was originally opposed to smoking, and two bulls were issued by the Pope excommunicating any one who used the weed. In 1608 a royal decree prohibited its cultivation, but in 1634 planting was started once more. By 1770 the production had reached 2,000,000 pounds annually.

CHAPTER IX.

OTHER TROPICAL PLANTS.

FRUITS.

THE Aladdin's lamp of the vegetable world is certainly the banana. If all that Aladdin had to do to get what he wished was to rub the magic lamp, all that the Porto Ricans need to do to gain wealth is to plant banana shoots. The trees will renew themselves, and after the second year the owner of a banana plantation has only to pick and ship the bananas, and receive his pay for the fruit. There is no plant requiring less attention, and yet the banana grows on the island in eight varieties, from the large triangular-shaped cooking variety, twenty inches long, to the tiny form known as "lady's fingers." At the present time about two billion bananas are shipped from Porto Rico each year. The number could be greatly increased. The sister fruit of the banana, the plantain, is cultivated principally by the poorer classes. It is most commonly eaten after being baked over a hot fire, when it is both agreeable and nourishing.

The oranges of Porto Rico are delicious. They are large, juicy, and sweet, and they have a delicate flavor. The prices paid for them seem to us ridiculously small. Some time since, an American is said to have purchased a whole shipload of them at two dollars a thousand. Imagine buying the finest of oranges at the rate of ten cents a hundred! Orange trees may be seen every-

where, but they grow best in the mountain districts. The fruit is at its height in January, February, and March. Between six and eight million oranges were shipped to the United States in 1898, from the port of



BRINGING BANANAS TO MARKET.

Mayaguez alone, bringing an average return of four dollars a thousand.

Destructive frosts sometimes ruin the Florida orange crop. No such enemy is to be feared in sunny Porto Rico. San Juan and Ponce are as near New York as is Southern California, and the flavor of their oranges is finer than hers. The orange markets of the Mediterranean are two thousand miles farther from American ports, and Porto Rico is therefore certain to diminish our trade with that region. In juiciness and sweetness

the oranges of the West Indies are as fine as any that come to the United States.

The most luscious pineapples in the world are found in Porto Rico. The West Indies are the native land of this queen of the fruits. It was discovered by the Spaniards, growing wild in the Bahamas. It is not very particular as to its exact locality, only give it light and a sandy, gravelly soil, and it will flourish. Pineapple plants are set in rows from three to six feet apart. An



AN ORANGE GROVE IN MAYAGUEZ.

acre of ground will thus support some thirty-five hundred plants. There is a fine outlook for this industry in the island.

The natives of Porto Rico hold the breadfruit in high favor. Although it has been raised there but a hundred years, it is so abundant as to be the sugar planter's terror,

for when this fruit is ripe the negroes are not inclined to work. They can live so easily upon breadfruit that they do not consider it worth while to work hard all day, just for the sake of earning money.



THE GUAVA.

No list of Porto Rican fruits would be complete without reference to the mango. The fruit is called "General Mango" by the Cubans, who claim that this tree has killed more Spanish soldiers than all their generals put together. It is said that the danger comes from eating the fruit in an unripe state.

The mango is wholesome when perfectly ripe, but no one who eats it unripe can escape death if attacked with yellow fever. The mango tree itself is attractive and beautiful. Like the tree in the midst of the Garden of Eden, it is "good for food" and "a delight to the eyes," but often one learns wisdom when it is too late.

Other fruits which flourish are the lime, lemon, citron, fig, date, guava (from which the delicious guava jelly is made), custard apple, tamarind, alligator pear, quenepa, lechosa, and mamey.

The cocoanut grows in all parts of the island. The fruit, which is large and has a fine flavor, is found at its best along the sandy coast. Many of the cocoa palms grow so near the ocean that the nuts fall into the water.

They are driven by the wind to other parts of the globe, where they take root in the soil and grow. It is said that the cocoanut tree lives a hundred years, grows a hundred feet tall, bears annually a hundred nuts, and has a hundred uses for man.

The tall, straight stem of the cocoa palm is capped by a circle of featherlike leaves that grow to be eighteen or twenty feet long. The flowers, small and white, are found on a long stem. The nuts grow in bunches of eighteen or twenty. When ripe they are apt to fall from the top of the tree with such force that any one beneath is in danger of receiving a severe blow on the head. Most of us know the cocoanut, with its hard shell, sweet milk, and meat. The nut is covered with a fibrous rind or husk. The meat is

used in making candy and cake, and yields the valuable cocoanut oil. The milk serves, where the cocoa palm grows, as a slightly acid, refreshing drink. The shell is capable of being highly polished, and is used for drinking cups and other utensils. The firm part of the trunk is the

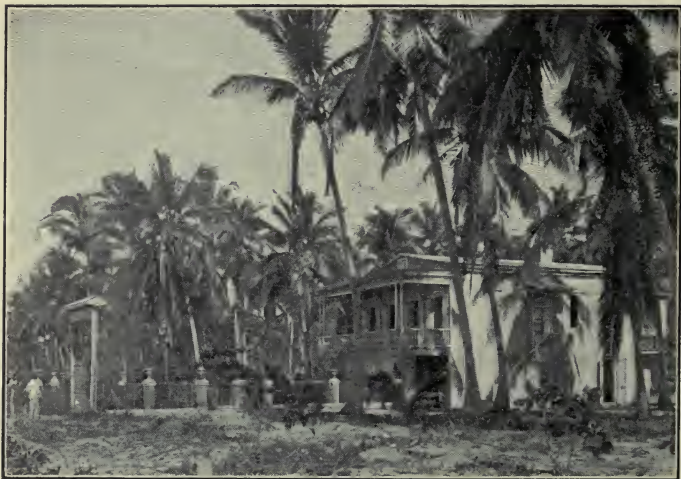
so-called porcupine wood, which is very hard and durable, and is used for all kinds of turned articles, and especially for inlaid woods.



THE MANGO.

OTHER FOOD CROPS.

It is a singular fact that rice, corn, and other products of the soil, once raised in large quantities in the island, are now imported to some extent from other countries. Maize, or Indian corn, is native to the soil, and three



A COCOANUT FARM IN MAYAGUEZ.

crops may be raised on the same ground in a year. In some districts it is grown for the leaves and stalks, which are used for feeding horses. It will grow at almost any height above the ocean, in any kind of nourishing soil, and is, in fact, the poor man's friend. The ordinary cereals, such as oats, barley, and wheat, do not flourish in the island. Consequently, breadstuffs and flour must be imported. Under proper cultivation the yield of rice is very abundant. The amount grown in recent years

has been limited, because Spain discouraged its being raised, in order to increase the amount imported from the mother country.

The vegetables of Porto Rico are of fine quality. The small gardener may raise several crops a year, delivering them to the market at good profit. The sweet potato is the great vegetable product, and, next to the banana and plantain, furnishes the main article of food for the poorer people. Upon the mountain slopes, where the land is not used for more profitable crops, the soil is given up to sweet potatoes and yams. The Irish potato does not grow well, because of the great amount of moisture in the soil.



GATHERING COCOANUTS.

In general, any vegetables which do not require a particularly dry soil may be raised in the island. These in-

clude the eggplant, beet, tomato, cabbage, turnip, watermelon, radish, celery, and squash.

Two kinds of a native vegetable called cassava are raised, the sweet and the bitter. The sweet cassava is widely used. Bitter cassava has in its fiber a poisonous matter which can be driven out only by heat, yet from it a fine quality of tapioca is obtained. It seems strange that from a poisonous plant anything so nutritious and healthful as tapioca can be taken. Although the fiber contains poisonous sap, the tapioca is made from the root. The root is dried upon hot plates, and in the process any poison within it is driven off. The heat makes the starch grains swell so that many of them burst. The whole forms the small irregular masses or lumps which we buy of the grocer under the name of tapioca. Starch is often made from cassava, and also from a plant known as the *eddoe*, which is a favorite food product; its roots are an article of food and prepared as we prepare potatoes. Arrowroot, now so successfully cultivated in the Bermudas, promises to become a valuable product in Porto Rico.

Spice raising might be made much more profitable in Porto Rico than it is at the present time. Nutmeg, pepper, clove, cinnamon, and vanilla, all find the soil of the island suitable to their growth. The pimento, from the berry of which we get our allspice, thrives in poor soil and in a hot, dry atmosphere. The tree grows wild in many of the West India Islands, and under proper conditions it yields excellent returns. A grove of pimentoes forms a beautiful picture, the trees reaching some thirty feet in height. Their stems are smooth and clean and the branches are covered with glossy leaves.

Cotton might be raised with profit, although at present there are no real cotton plantations in the island. The plant grows along the coast, and the product is as good as the best raised in our own Southern states.

MEDICINAL PLANTS AND DYES.

The natives of Porto Rico claim that twenty-eight species of medicinal plants may be raised in the island. Certain herbs and shrubs which grow wild in the forests, and are now gathered by women and children and sold to the apothecary, might be made serviceable for export. From the seed of the castor bean, or *Palma Christi*, castor oil is made. Cocaine, used to deaden pain, comes from the dried leaves of the *coca*. Attempts to raise



THE BLOSSOM OF THE CLOVE TREE.

the cinchona tree, from which quinine is obtained, give promise of success.

Certain important vegetable dyes grow in the island. The method of obtaining the valuable dye known as indigo is rather interesting. The substance comes from a plant, which is bruised and fermented in water. A blue material which collects in the tub or vat, is dried in cakes or lumps, making the indigo. *Annatto*, a wild plant, produces the rich yellow dye used for coloring butter. The plant has gorgeous red-and-yellow bristly pods, which burst open when ripe, showing the tiny

seeds. From the seeds the dye is made. In early times the native Indians used this yellow dye to color their skins. Logwood produces a deep red color. England imports a million dollars' worth of logwood a year from Porto Rico's near neighbor, Jamaica.

FLOWERS.

Porto Ricans are fond of flowers. The climate is so uniform, and there is so much moisture, that flowers grow in great abundance and in almost countless varieties. Great bunches of roses can be bought for a few cents. A whole armful of tuberoses or gladioli may be purchased for a dime. A dozen camellias cost less than does a single flower in New York. Roses, heliotropes, begonias, lilies, azaleas, and rhododendrons have been imported from Europe. More than a hundred varieties of the orchid alone are found.

Everybody who can afford it has a garden plot. Some of these are arranged with charming taste. The most elaborate gardens are adorned with fountains and statues, arbors, hedges, and walks. One of the favorite pastimes of the children is making wreaths and garlands, which the little folks wear as they play on the verandas of their homes, or in the yards.

Governor Allen, writing from San Juan in May, 1901, says that, while the chief dependence of the island is agriculture and stock raising, there is no reason why manufactures should not flourish. He believes that nothing but the finished products should leave Porto Rico. The island can sell to the world coffee ready for the consumer's use, refined sugar and molasses, chocolate and all its products, canned fruits equal to those of Cali-

fornia, and many other things which will bring in money enough, not only to support the present number of people, but five times as many. It really is no wonder that Porto Rico is called the garden of the earth.



CHAPTER X.

FORESTS AND MINERALS.

THERE is a law in Porto Rico that every one who cuts down a tree shall plant three others. Like many other laws in the island, this one has fallen into neglect. But that such a law should be enforced is evident from the appearance of the country in many places.

At first sight the aspect of the island is that of an open wooded landscape. On the slopes of the hills, along the sides of the roads, around every shanty, and throughout the great coffee plantations, are many trees, a few of which are the remnants of the ancient forests. Only a few timber-making trees have been spared the woodman's axe.

In his "Forest Conditions of Porto Rico," Mr. R. T. Hill says that Porto Rico was originally completely covered with forests, from the level of the sea to the top of the highest mountains. Scarcely a square foot of its area was without its tree growth, varying in height from the small mangrove bushes which border the seashore, to the gigantic trees mingled with the trunks of towering palms, which add height to the loftiest peaks and ridges.

When Columbus first looked upon the island it was densely wooded, with here and there a clearing made by

the Indians. With few exceptions, no extensive forests are now to be found in the island. A few acres are preserved here and there in the Sierra de Cayey and the Cordillera Central, especially between Aibonito and Adjuntas. These small patches will not amount to ten square miles of standing timber, and have been largely deprived of their most valuable trees. There is also a



UNDER THE SPREADING PALM.

small area of forest preserved in the pepino hills near Aguadilla, upon a piece of land belonging to the government. There may be a few more acres elsewhere. In general, the mountains are stripped of their forests, although some excellent trees still stand, just as walnut trees are found preserved in the deforested regions of the United States.

Upon the summit of El Yunque a portion of the original forest has been retained. At this height—thirty-six hundred feet—constant moisture prevails, which is favorable to the growth of trees. Steep and rugged trails through red clay and mud, almost impassable, make it somewhat difficult for the woodman to reach the highest peaks in order to level the trees. These trees are of great value, being of hard wood varieties, such as Spanish cedar and ebony, and some species unknown in the American markets.

Of all the trees of Porto Rico, the most graceful, the most stately, the most useful, is the cocoanut palm. It grows along the playa plains, it borders the fields of sugar-cane, it towers above the lesser growths in the gardens of the rich and it shelters the huts of the poor. The palm is the tree of the rich and the poor alike, a tie between them; to the former an ornament, to the latter it is meat, drink, and shelter.

The wood when dried is made into chairs, tables, and cabinets, its grain being very beautiful and capable of a high polish. It is shaped into boats and tubs. From the stalks of the leaves combs are made. The leafstalks are also used in making mats, hats, and baskets, while the fibrous material near the center is fashioned into sieves and woven into fabrics for personal wear. From the roots of the palm is extracted a remedy for fevers, and from its flowers an astringent. "From the fruit or nut, besides the delicious water and jelly it contains when green, comes the *copra*, or kernel, which is dried and yields fifty per cent of its weight in pure oil, after which the refuse is valuable for manure as well as for fowl and cattle food." From the outer husk of the cocoanut a

fiber is prepared, called *coir*, which is manufactured into ropes, brooms, brushes, bedding, etc.; the shells are useful as lamps, cups, spoons, and scoops. In fact, one might go on enumerating the various articles used in the primitive domestic life of the tropical native, and find nearly all supplied by the cocoa palm.

“Another native palm, found farther up in the hills and mountains, is the beautiful *oreodoxa*, tallest of the tribe, which sometimes attains a height of 150 feet. All the palms, and particularly this one, are celebrated for their ‘cabbage,’ or terminal bud, which is a delicious morsel when divested of its outer wrappings and boiled like cauliflower or cabbage. To make use of it, implies, of course, the destruction of the tree; but it is a matter of little consequence to a hungry native, with a forest full of palms, who only considers the labor necessary to cut down the tree, and not the injury he does to the landscape. This vandalism is not confined to the Spanish islands, for there was once a planter in the English island of Barbados who, when the question arose as to the height of a magnificent palm on his estate, ordered it cut down, that he might ascertain to a certainty. He wagered that it would measure over 150 fifty feet; and he won the wager, but he lost the palm.”

There are certain other varieties of the palm growing on the island, most of them imported, such as the sago and date. The date palm is the admiration of all who see it. It has never been cultivated in Porto Rico for commercial purposes, but with care it might be made to yield a rich return.

The palm most highly prized by the Porto Ricans for

ornamental purposes is the "royal palm." The upper end of the trunk of this tree is a delicate, pointed, green shoot from ten to twelve feet long. About once a month a bunch of fruit some eighteen inches long grows out at the base of this end portion. It is full of small green, olive-shaped nuts, serviceable for swine only.

Clusters of the feathery bamboo may be seen growing everywhere. The peasant uses its stem to bind his palm-leaf roof. Larger sections serve him for fence posts. The thickest of the stems he sells for telegraph poles.



ROYAL PALMS.

The tamarind is a large and feathery tree of the great acacia family, resembling our own locust in leaf and fruit. It is found on the plains and in the deepest woods.

Its fruit is used in the making of confectionery and jelly, and the juice, diluted, furnishes an agreeable drink.

The wax of the wax tree, found along the river banks and on the coast plains, is used by the natives in the making of candles.

The pawpaw is one of the most conspicuous trees of the island. It reaches a height of from forty to fifty feet. It has no solid branches, but sends out spreading leaves which form a crown at the top. Large clusters of fruit grow in the angle of the leaf where it is joined to the trunk. The fruit is green at first, afterwards turning yellow within and without. The inner rind tastes somewhat like the muskmelon. The fruit is used for medicinal purposes and for jam and preserves.

The *bixa* tree, common along the plains, is used for dyeing wool, cotton, and other fabrics, and is also employed in making a kind of cloth.

From the short trunk of the *emajagua* many long, straight twigs sprout forth, from which ropes and cordage are made for rigging the native boats.

Other trees which aid in the welfare of the people are the *guanabana*, used for curing fever; the *higüera*, whose gourdlike fruit serves for plates, pitchers, and spoons, and most of the kitchen utensils of the poor; the *tabanuco*, which yields a valuable resin; the enormous *ceiba* tree, from which canoes fifty feet long and ten feet wide were made; and the *mayama* or *mamey*, which resembles the magnolia in shape and in waxlike gloss, and which produces a delicious melonlike fruit. The reddish brown *ausubo*, noted for its durability, supplies the frames of houses and wagon spokes. It is the

most abundant of the hard woods, and resembles teak. Two varieties of the Spanish cedar are occasionally found. A twelve-inch cedar plank, one inch thick and twelve feet long, will bring, in the mountains, one dollar.

Among the hard woods are mahogany, ebony, laurel, willow, and an odorless kind of sandalwood. The present supply of useful trees is not equal to the demand. The older buildings are constructed of native woods, but the houses of recent date are of hemlock, spruce, and pine, imported from Nova Scotia. The few sawmills in the island are principally employed in cutting up cedar wood for cigar boxes, and in the making of ausubo wagon wheels.

One of Porto Rico's numerous names is "The Isle of the Gate of Gold." How much of a gold field the island really is, no one can, at the present time, say. It certainly contains no such wealth of gold as California, Australia, or Alaska. Nor has it probably in any sense ever equaled its neighbor, Santo Domingo, whose gold-bearing river Columbus named *Rio del Oro*, the River of Gold. What he found in the bed of the river was but the washings from the great gold storehouses among the inland mountains. To this day a native of Santo Domingo will show the stranger a handful of gold dust which he has obtained by washing with a wooden dish.

The dazzling reputation gained by Porto Rico in early times was no doubt due to its supposed treasures of gold. When Ponce de Leon landed on the island in 1509, gold was brought him from the river beds. But that the rivers "poured down sands of gold" is rather beyond belief. A history of Porto Rico written in 1788 states that signs of gold had been found in many districts of

the island, and gold-bearing sands in such rivers as Luquillo and Mayaguez. Should gold really exist in any quantity, the island's new possessors will surely find it out.

It was recently reported that gold had been found in the upper portions of El Yunque and also in the region south of San Juan, near Corozal. The inhabitants of certain towns have long been bringing in small quantities of gold dust, to exchange for needed household goods. To find the precious material the native dives into the water, seizes it, and brings it to the surface in his clenched fists. It is then panned out on the banks of the stream.

General Sanger says, in his recent census report, that, while many valuable mines have been found in Porto Rico, and while good mines were long ago worked by Spaniards, no mining is carried on at the present time. Yet it is not at all improbable that a geological examination may develop notable mineral resources.



CHAPTER XI.

ANIMALS, INSECTS, AND FISH.

IT seems strange to any one acquainted with the animal life of such sections of the United States as the Adirondack or Rocky Mountains, that the largest native quadruped of Porto Rico is a little creature no larger than a rabbit. The agouti, as it is called, belongs to the rodent family. It is timid, inoffensive, and sensitive to danger. The animal may be found upon the

stony mountain sides or at the edges of the woods, where it may be recognized by its dark brown coat of shiny hair.

The wild animals which came originally from other countries, but which have been in the island for many generations, are more curious than dangerous. Many years ago the mongoose was transported by the British government from India to rid Jamaica of rats. A Spanish official brought some of the animals from Jamaica over to Ponce.

They flourish exceedingly in the island, and are so destructive that they are a lawful target for anybody who has a gun.

The armadillo is occasionally seen.

This curious

animal, instead of drawing in head and feet in time of danger as the tortoise does, rolls himself up into a ball so that his body is completely surrounded by the horny plates which give him his name. The armadillo burrows skillfully in the soil, and slips down his hole into the ground so quickly that he is seldom caught. He usually stays in his earthy dwelling except at night.

The iguana is a connection of the great lizard family. He resembles the alligator in appearance, save that he is



AN AGOUTI.

green instead of black, but he lives among trees. He presents an angry front when cornered, although he is by nature harmless and timid. The guinea pig, the Capuchin monkey, the bat, the rabbit, and other small animals find the island a comfortable home.

That curious creature known as the land crab, so abundant in some parts of South America, is another inhabitant of Porto Rico. He differs from the small crab of our northern seacoasts in size — he is sometimes two feet long — and in his peculiar gait. Instead of crawling either forward or backward, as do the ordinary crabs of the United States, he stands upright on his rear claws and hitches along diagonally, with his small head tipped to one side and his clippers waving in the air to



A MONGOOSE.

aid him in keeping his balance. He is harmless; but he does rather remind the observer of a tipsy man trying to keep from falling down, and two or three large land crabs edging along near each other are enough to startle considerably any one not accustomed to the

antics of this peculiar crustacean. The tortoise, in his clumsy, box-like house, is to be found in Porto Rico.

Sheep, goats, horses, oxen, and mules are the principal domestic animals. The Porto Rican horse came originally from Arabia, but life in the island has been unfa-

avorable to his best development. The people of Porto Rico are not as careful of their animals as the faithful creatures deserve. The ponies carry heavy bags of coffee or sugar, or are loaded with great baskets of fruit, one little pony often toiling along under a burden of three hundred pounds' weight.

It is not unusual to see a man making his way into Ponce, or Mayaguez, or some other of the large towns, with a load of plaited pack saddles, two huge bales of grass for horse collars, and the owner himself—all upon one little horse struggling slowly forward.

These meek and submissive animals are compelled to carry over the steep mountain trails such freight as chairs, tables, rolls of floor-matting, boxes, and trunks. A horse in the United States would show great displeasure if made to carry on his back a table or a trunk, and the load would come off very shortly, or at least it would certainly never reach its destination in safety. Sometimes an entire Porto Rican family may be seen going to church on one pony. The father and mother mount the animal, and the children ride in two baskets, one hanging over each side of the pony's back.

The patient, willing, and long-suffering Porto Rican



A LAND CRAB.

horse gets little pleasure out of life. He suffers somewhat from the climate, but much more from neglect and abuse. In spite of the hard work given him to do, he is oftener fed on grass than on corn. When too worn out to endure life any longer, he gives up the conflict and dies. Even then he is left unburied, his body being exposed until nothing remains but the bones, bleached white by sun and rain.

Most of the heavy teaming is done by oxen and mules. The oxen are large, stout creatures with wide-spreading horns. They step quickly, pull steadily, and seldom show signs of weariness. Two oxen can haul a heavily loaded wagon over the rocky roads of Lares or the muddy trails of Adjuntas, which is saying a great deal in favor of any animal. Oxen do not wear yokes, as in the United States, but heavy timbers are fastened behind the horns so that the whole weight of the wagon pulls upon their heads. This is a very cruel practice, and our government officials are said to be trying to put a stop to it.

A contributor to the *National Magazine* for October, 1898, says: "Not only is man unkind to man, he is callous of the woes of beasts. It was from man's treatment of the animals that I got my first shock. This was caused by the Porto Ricans who were goading the oxen which draw the heavy carts of rum and sugar to market. We had not gone a mile towards the city before we came upon long trains of ox teams. The drivers had goads tipped with sharp steel an inch and a half long. They thrust this cruel weapon into the oxen and then turned the instrument until the poor beasts bled."

The age of light but strong farm wagons has come. May it soon reach Porto Rico, for its clumsy carts of heavy timbers, and wheels with broad tires, are too cumbersome for use on muddy or rocky country roads like those of the island.

The razorback hog is a familiar sight in the rural parts of the island. Wherever we go we find him running about. He is usually hungry, and squealing at the top of his lungs.

He needs considerable watching to keep him from running away; for, like the porkers with which we are familiar in the United



AN ARMADILLO.

States, he is a very independent creature. On the family washing day, when the women go to the river to cleanse their garments, they naturally take their children along for safe-keeping. It is equally necessary to take the swine too, lest they wander off into other people's territory and be lost.

It is said that there are no poisonous reptiles and few insects, save mosquitoes, in the island. These latter are, it must be admitted, legion. They are so tiny that American mosquito netting is useless as a protection from their ferocity, and so numerous that it is a constant source of wonder where so many insects of a kind can possibly come from.

A traveler who has summered and wintered in Porto Rico, and has camped out under palms and ceiba trees, says that he was never stung by anything more dangerous than a hornet or an ant. Scorpions, centipedes, and tarantulas are occasionally found, but, considering the heat, their numbers are few. That lively insect known as the flea abounds, and the species called "jigger" is a terror to those who go barefooted. It pierces the skin, working its way into the flesh. At first the victim feels only a slight tickling, then the mite embeds itself in the foot and there lays its eggs. Pain and disease follow, causing lameness, and in severe cases the loss of the foot.

The Porto Ricans are particularly fond of fish. Besides what is eaten fresh, large quantities of dried, pickled, and canned fish are imported each year. In 1897 this amounted to more than thirty-four million pounds, and cost two million dollars.

There are only about eight hundred people who make a living by fishing. They use less than four hundred sail and row boats. Perhaps fishing may be taken up again as an occupation, but it was limited under Spanish rule, since only those who had paid for a special license and were enrolled in the reserve naval force were allowed to engage in fishing as a business. In December, 1898, by order of General Brooke, the privilege of fishing in rivers, streams, lakes, and all other waters of Porto Rico, was made absolutely free.

Small fishing towns and settlements are found all along the coast. Such a place is Guanajibo, whose catch of fish goes to Mayaguez near by. One sloop, of seven and a half tons burden, and thirty feet long, has the

principal share in the fishing business. This fishing vessel goes out as far as the Mona Islands, a distance of forty-two miles.

Palo Seco, near the mouth of the Bayamón River, supplies most of the fish for San Juan. Sixty of its two hundred inhabitants earn their livelihood by fishing. Parguera, Porto Real, and Punta Santiago are all fishing centers. These hamlets present a picturesque appearance with their thatched roofs, clustering palms, and ceiba trees. In some of the principal towns on the eastern and western coasts fishing is an important industry. The lack of good means for transportation and the scarcity of ice make the profits from fresh fish very uncertain.

The great variety of fish in the waters of the island gives to the fish business a promising outlook. In the fresh-water streams many species are found. The waters along the coast abound in Spanish mackerel, sardines, red snappers, and bonitos. The bonito is a large fish found only in tropical seas.

Oysters, clams, lobsters, and shrimps inhabit the waters around the island. The sponge grows in Porto Rican waters, and many of these are brought from there to the United States every year.

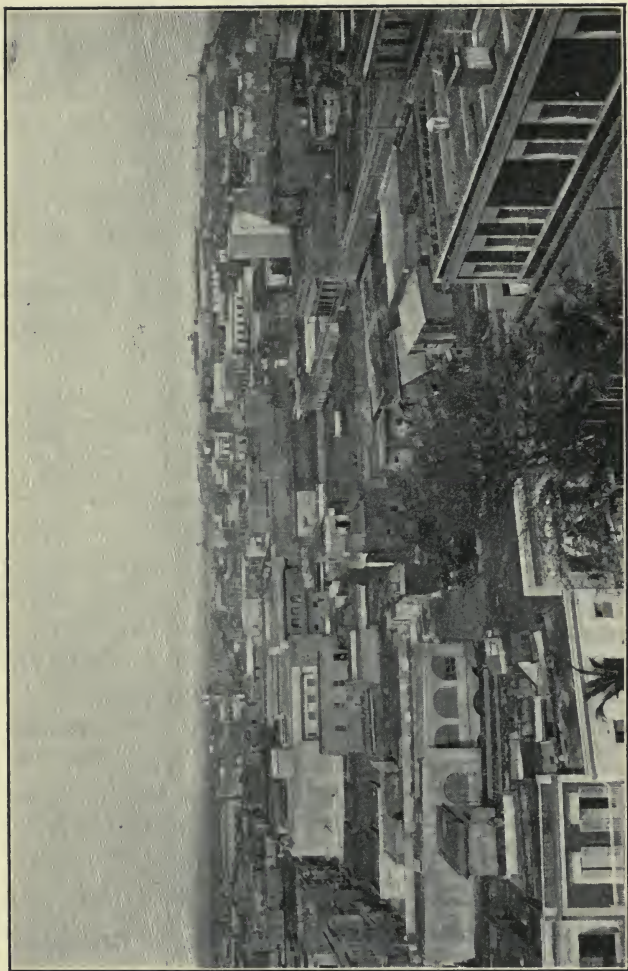
Thirty species of coral are to be found on the coasts and the offshore reefs. That exquisite ocean flower, the sea anemone, may be gathered from the waters surrounding the island.

CHAPTER XII.

THE CITIES OF THE COAST.

NINE TENTHS of Porto Rico is mountainous. The remaining one tenth lies along the coast, and has a water front of 360 miles. The island is rich and fertile, and but for one defect her chance of standing high in the commerce of nations would be good. This defect is lack of good harbors. She has many open anchoring places, but her facilities for loading and unloading merchandise at piers like those of San Francisco, Boston, and New York are very limited.

There is one noble exception. San Juan, the capital, has a harbor of which any country might be proud. The harbor is almost surrounded by land, and is both serviceable and deep. It is guarded by that grim old sentinel, Morro Castle, which towers more than a hundred feet above the sea. Our entering must be cautious, as the passageway is narrow. Between the frowning walls of the great castle on the left and Point Palo Seco on the right there is a distance of scarcely a mile. The channel through which vessels must pass is only four hundred yards wide, hardly more than twice the length of some of our ocean steamships. Even though the water is smooth, an experienced pilot is required to steer our ship into port. When the weather is rough, and the fierce north winds plow the waters of the channel and churn them into seething foam, it is very dangerous to enter. Many a time have ships put to sea



SAN JUAN, FROM FORT SAN CRISTOBAL

to escape being wrecked. But once within the harbor, a boat is always safe. The elevation of the city on the northern side serves as an effective screen to keep off perilous winds.

The rivers which empty into the harbor bring down a muddy silt, just as the Mississippi washes mud into the Gulf of Mexico. Formerly portions of the channel were nearly choked by this silt. A thorough system of dredging was begun, however, in 1889, so that now the entrance has been widened, and has been deepened by nearly thirty feet. The water along the wharves is twenty-two feet deep. Spanish convicts did most of the work of dredging, their wages being ten cents a day.

We have read about the Spanish city, St. Augustine, Florida, and we think of it as very old. But San Juan (in English, St. John) is much older. It was founded in 1521, and St. Augustine not till 1565, forty-four years later. Therefore, San Juan is probably the oldest city over which floats the American flag. As compared with our own cities, it is not very large. Its population numbers about 32,000, and it would hardly be called more than a good-sized town in the United States. Like New York, it is built on an island. This island extends a distance of two and a half miles, from Morro Castle on the west to Fort San Cristobal (meaning St. Christopher) on the east. The width of the island from north to south is only half a mile.

The Morro Castle of San Juan, like its more famous namesake at Santiago de Cuba, was a military necessity, and recalls four centuries of Spanish rule. The steep and rugged cliffs at the entrance to the wonderful San Juan harbor were seized upon as offering admirable

means of defense. Morro Castle is of seventeenth-century origin, and was begun in 1630. It is built in the form of an obtuse triangle, having three tiers of batteries so arranged as to allow of cross-fire in time of action. During the recent war both Morro and San Cristobal, which is a century younger, were equipped with bomb-proof chambers and modern, up-to-date guns. Morro Castle is in itself a little military town, with barracks, officers' quarters, chapel, bakehouse, water tanks, and dungeons opening on the sea. Here is the light-tower of the city, with its modern lantern shining over the ocean from a height of a hundred and seventy feet.

As we enter the city proper it seems as if we were stepping back into mediæval times. There are all the marks of the walled town of feudal days, with portcullis, battlement, parapet, bastion, and remains of moat. An immense wall surrounds it, making San Juan the only city of its kind belonging to the United States. We are reminded, as we look about, of the stories we have read of knights and ladies, and tournaments and bouts. The town is of the same quaint character as Lyons in France, Nuremberg in Germany, or old Seville in Spain. The streets are narrow and crowded. Buildings for residence and business are hemmed in by stone walls. The thousand dwelling houses are of mortar or stone, built regardless of convenience or of taste. The roofs are flat, to catch the rain, which pours into the cisterns below them. The storekeeper usually lives on the floor above his shop, though some of the more well-to-do have houses outside of San Juan, in one of the rural towns, such as Rio Piedras or Santurce. In a country where earthquakes are feared the houses are

not high; each one in San Juan has its balcony. Since the sidewalks barely allow two persons to walk abreast, we will take the middle of the street, as pedestrians often do. We must keep a sharp lookout, however, for the drivers of coaches. They race down the narrow streets, shrilly shouting their coming, but leaving with us the consequences if an accident occurs. The streets run in nearly parallel lines, and cut each other at right angles, six of them running east and west, and seven north and south.

Like every town of the island, San Juan has its *plaza*. This is a public square, like the *piazza* of Rome, or the *place* of Paris. San Juan itself has two plazas and several *plazuelas*, or little squares. Around the chief plaza are located some of the important buildings of the city, including the City Hall. To reach the other important plaza we must go to the eastern extremity of the city island, near Fort San Cristobal.

The largest building in San Juan is the Ballaja barracks. It overlooks the parade grounds and covers an immense area. Among the public buildings are the theater, with a seating capacity of five thousand; the palace of the bishop; the military hospital; the cathedral; the church of Santo Domingo; and the Jesuit College. The governor of Porto Rico occupies a spacious edifice which overlooks the harbor.

The most interesting old structure in the city is the "Casa Blanca," or White House. This was built and occupied by Ponce de Leon. We learn in United States history that Juan Ponce de Leon set sail from Porto Rico in search of the fountain of perpetual youth. He failed to discover the fountain, but he found instead



THE FIRST TROLLEY CAR IN SAN JUAN CROSSING PLAZA PRINCIPAL,

what was much more worth the while, the beautiful country which he called the Land of Flowers, or Florida. Casa Blanca stands on the side of a hill and is almost a palace in size. It has a walled garden, with a border of palms, and was built for military defense.

The city has three clubs, one patronized by the Spaniards and called the Casino; a second patronized by the Porto Ricans; and an American club, which has sprung up in recent years, made up largely of army and navy officers.

The people of San Juan are almost as eager for the news of the day as are citizens of New York or Chicago. To meet this demand several daily and weekly papers are published. As yet these are all in the Spanish language with two exceptions, the *San Juan News* and the *Porto Rico Sun*, which are in both English and Spanish. Others will appear in English in due time.

The summer climate of the capital city is not as healthful as that of the interior towns, but during eight months of the year the city is an attractive place of residence. Freedom from malarial diseases and fevers is due to its comparative cleanliness, as well as to the steady, cool trade winds which sweep across the island. This cleanliness is due, in turn, to the fact that the principal streets fall rapidly to the water's edge and carry off much of the city's filth and débris.

A Porto Rican writer tells us that among the most interesting sights of San Juan are the arrival and departure of the mail steamships belonging to the United States. These boats come every week, bringing greetings from the great republic of the north. They arrive

at San Juan upon a certain day of the week and at a prescribed hour. Many resident Americans are at the dock to watch the boat come in, because it will bring the latest news from home.

The enormous quantity of merchandise carried by these and other ships is significant of the great commercial movement between Porto Rico and New York. Huge pyramids of grain and flour sacks are piled upon the pier after their removal from the boats, a dozen of which are continually discharging cargoes. Laboring men rush back and forth like companies of ants. A hundred wagons come and go along the esplanade, carrying grain and other stuffs from off the wharf.

Although the island numbers scarcely a million inhabitants, its foreign trade is very large. Since the commodities of the island are neither substantial foods nor manufactured products, it is necessary to import nearly everything which is consumed, and as a consequence to export nearly everything produced. Up to the year 1900 the commerce of Porto Rico was divided between the United States and Europe; but with the establishment of free trade between the island and North American markets, the western trade has been greatly increased, while that with the markets of Europe has diminished in like degree. Free trade with the United States has also caused extraordinary increase in the amount of sugar, tobacco, and tropical fruits produced in the island. During certain seasons of the year the export of the latter is so constant that it has been said rather fancifully that the boats with bananas and pineapples leave in their wake a perfumed path, which reaches from San Juan to New York.

As the steamers leave for the north, crowds of people gather upon the dock to bid their friends farewell. Hundreds of handkerchiefs are waved, and as the ship steers for the open sea many others flutter, like white doves, from the decks, while the steamship moves swiftly over the quiet waters of the bay.

Porto Rico is no exception to the rule that the chief city serves as a pattern for the entire country. What Paris is to France, London to England, Madrid to Spain, Havana to Cuba, San Juan is to Porto Rico. In social customs, recreations, and education, the country people follow the lead of their capital. If in this fact there is much to regret, there is also much to occasion satisfaction. San Juan, being the principal port, brings together ships of many nations. Naval officers of all lands meet here and exert an influence upon the people of the city.

On the opposite side of Porto Rico from San Juan is Ponce, the second city of importance and the southern gateway. The picture, as we approach by water, is very attractive. For miles back against the sky-line rows of hills rise up, from one to two thousand feet high. Low, swampy playas, or beach lands, in dense tropical luxuriance, may be seen at the right, while on the left the shore inclines to the northward in picturesque curves, cocoanut trees fringing its border. The broad bend of the coast line forms an open harbor which will accommodate ships of twenty-five feet draft. The port of Ponce, with its custom-house and consular offices, is a bustling center of trade. Its large warehouses make it contrast favorably with San Juan, which is most deficient in this respect. Although there is no wharf at Port Ponce, a vast amount of merchandise is carried back and forth from shore to

anchored ship by means of lighters, or heavy transport boats.

It is two miles over the cane fields from the port to the city of Ponce. The well-shaded road is lined with the huts of the poorer classes. Many warehouses stand along the way. Let us enter the city, climb to the hospital roof, and take a bird's-eye view of Ponce.



THE CATHEDRAL AT PONCE.

Many of the dwellings have covered piazzas, but they are built close to the narrow sidewalks. There are some buildings of stone and brick, but wooden houses predominate. The streets are wide and macadamized. Cocoa and royal palms, and mango, fig, and banana trees give a tropical aspect to the scene.

A beautifully shaded plaza occupies the center of the city, with the town house and cathedral facing it. The

dignified old cathedral, with its two spires and its massive altars, comes down from the year 1600, when the town was founded. It has undergone extensive repairs from time to time. The oldest Protestant church on the island is at Ponce; this church was built in 1874. The city has three times as many streets as San Juan, yet its population is four thousand less, the number at present being about 28,000.

Ponce attracts Americans. Its hospitality is frank, open, genial. It is the most enterprising town of Porto Rico, and has the business push which Americans appreciate and enjoy. It owes its wealth to the great sugar plantations of the interior. Large quantities of coffee are also brought to the town, carried to the port two miles away, and there shipped to other countries.

The elevation of the city above the sea gives it freedom from the fatal miasma that lurks in the levels below. The view of the city from the hills on the north side is enchanting, but a nearer look at the huts and shanties dissipates something of the charm.

The pure water supplying the city is brought from the mountains by an aqueduct four thousand yards long. Hardly more than a mile from the town are the famous hot springs, La Quintana, to which those afflicted with rheumatism resort.

Mayaguez, the third city, is on the western coast. It is one of the finest cities on the island, and as a place of residence ranks first. Its population numbers about 15,000. It is the great coffee market of the west coast. Pineapples and cocoanuts are exported in large quantities. The thirty-seven streets of Mayaguez are broad and well paved; there are three plazas. The houses are

finely constructed, and are surrounded by gardens containing flowers, fountains, and statues. The city supports a hospital for soldiers and a home for the aged and infirm. There are also fine military barracks and a theater. Mayaguez is built on rounded hills which fur-



THE PLAZA AT MAYAGUEZ.

nish excellent drainage. The foliage is superb, the flowers bright colored and abundant.

The industries of Mayaguez are famous throughout the island. Four large coffee mills receive the sun-dried berry from the mountain regions farther inland. Here machines remove the second hull, bluing and polishing the berry, and so preparing it for the market. No other city of Porto Rico exports as much fruit as Mayaguez, most of this fruit coming to the United

States. The city has a tannery, and four chocolate manufactories. The Mayaguez chocolate is excellent. The public market is the best in Porto Rico. It is built of iron and stone, covers an area of more than fifteen hundred square feet and cost nearly \$65,000. To Mayaguez belongs the distinction of having a fine iron bridge. The country about Mayaguez shows less poverty than that surrounding any other Porto Rican city. The plain is productive, and here and there the houses of well-to-do planters and fruit raisers are to be seen. Because of the various industries, wages are a little higher than elsewhere in the island.

About seven miles outside the city, across a rough and mountainous country, is the sanctuary of Montserrat. This wild-looking place is visited by many pilgrims, and numerous legends have grown up about it.

The sanctuary takes its name from a similar shrine in far-away Spain. Among the Pyrenees there is one rocky mountain peak called Montserrat. The monastery near its summit was founded there because of an old legend to the effect that, when Christ was dying on the cross, as he breathed his last, there was a terrible convulsion of this mountain, and the rocks forming its jagged sides were thrown out. The locality has long been held sacred in remembrance of this supposed remarkable event.

The church of Montserrat itself, like its namesake in Spain, is on the top of a mountain. It is of masonry, quite large and rather attractive. From this mountain top we can see the most beautiful plain on the island, watered by the Guanajibo and Boquerón rivers, and inclosed by high mountain ridges. The plain is bounded

by the sea and has within it the towns of Cabo Rojo and San German.

The deep curve in the shore which serves as a harbor for Mayaguez lies wide open. Submerged reefs built by the coral polyps furnish a valuable breakwater.

Thirty-five miles to the west of San Juan is the seaport of Arecibo. A narrow-gauge railroad connects the two places. The Arecibo, the second river in size in the island, flows past the city. Though shallow, it is a source of much prosperity to the people. Arecibo is the great coffee port of the northern coast. It has a population of about 8000. Its church is one of the finest in the island. This church faces the plaza, from which



THE CITY OF ARECIBO.

streets run so as to form squares. There is no sheltered harbor, and no ship dare anchor before the city when a "nother" is on. The scenery of the surrounding country is charming.

The beautiful bay of Aguadilla forms the seaward approach to the city of this name on the northwest coast. Into its deep waters the large boats of our navy, like the *Oregon* or *Illinois*, could enter without fear of running aground or of striking a rock. The city lies at the base of a steep, fruit-covered mountain. Palms and lemon and orange trees grow in abundance. A large river of clear, sparkling water springs from the mountain above, and flows through the midst of the city. It is partly because of the pure water to be obtained here that Aguadilla is the favorite port for trading-vessels from Havana and the Gulf of Mexico. The inhabitants number about 6400.

Almost on a straight line south from San Juan, and fifty miles east of Ponce, lies Guayama. Its seaport, Arroyo, is five miles beyond. Guayama is the center of the great sugar and coffee growing region of the south, the city alone having nine sugar mills. Arroyo has a flourishing trade with the United States. It is said that almost anything will grow on the lowlands about the town. An insufficient water supply is the principal drawback to the growth of many tropical products. From an average of 2800 pounds an acre in favorable seasons, in time of severe drought the production is reduced to almost nothing. Engineers are now at work upon plans for irrigating the entire region. Guayama has a population of 5300; Arroyo has 2100 inhabitants. We import to the United States from Arroyo, annually, 10,000 hogsheads of sugar and 5000 hogsheads of molasses and rum. Most of the staves for these hogsheads are made in Portland, Maine. The malagueta plant is found here; from it the best

bay rum in the world is produced. Large quantities of this product are purchased by the royal families of Europe. It is claimed that the plant grows nowhere in the world except in the West Indies.



THE LIGHTHOUSE AT MAUNABO.

On the eastern border, three miles from the coast, is the town of Humacao, with a population of 4400. Corn, beans, yucca, potatoes, and other vegetables are said to be raised at Humacao. Oranges and lemons are produced easily, though at the present time only sufficient quantities are raised for home use. As in many other towns, the church is the prominent building. There are a broad plaza, a town house, barracks, a hospital, and a jail.

There are several other towns of industrial prominence on or near the coast. Maunabo, with its rich cane fields, produces thousands of pounds of sugar each year. Salinas, named from its salt deposits, has a good harbor and a flourishing trade. Carolina, Camuy, Loiza, Isabela, Rincón, Dorado, Luquillo, all of them on or near the coast, are of commercial value to the island.

Vieques, an island belonging to Porto Rico, lies thirteen miles to the east. Vieques is twenty-one miles long and six wide. The coast line is low, but a chain of mountains extends through the center. There are several commodious harbors where the largest ships can ride at anchor. The climate is good, but there is little running water, and severe droughts occur from time to time. The inhabitants number between six and seven thousand, more than a third of whom are in the town of Vieques on the northern side. The island has always been considered prosperous, and has long produced a fine quality of sugar-cane. Cattle raising is an important feature.

The inhabitants of Culebra, or Snake Island, seventeen miles east of Cape San Juan, live by fishing and woodcutting. The soil of the island is barren, and the hills are covered with a low growth of timber of little value.

About twelve miles south of Ponce is Coffin Island. The supply of fish is abundant, but there is no good place of anchorage.

Mona, or Monkey Island, forty miles west of Cabo Rojo (meaning Cape Red), ends on one side in a bold headland topped by a huge overhanging rock. This rock is known to seamen by the suggestive name of

“Caigo ó no Caigo” (Shall I fall or not)? The population of the island is small. Its coast rises abruptly from the water and can be seen by the sailor many leagues away. Goats, bulls, and swine, in the wild state, can be found there. This lonely island gives the name to the broad channel separating Porto Rico from Santo Domingo.



CHAPTER XIII.

INLAND TOWNS.

PORTO RICO is, in general, as has been already stated, an agricultural community. As the soil of the island is the chief source of its wealth, the inland centers as well as the seaport towns are of great importance.

The whole island is divided into what are called departments, corresponding somewhat to our divisions into counties. There are seven of these departments. That of Humacao extends the whole length of the eastern side of the island, with an area of 413 square miles and a population of 88,501. To the west of Humacao are two, — the department of Bayamón on the north, with an area of 542 square miles, and a population of 160,046; and Guayama on the south, area 561 square miles, population 111,986. The west central part of the island also contains two departments, — Arecibo, its area being 621 square miles, and its population 162,308; and Ponce, area 822 square miles, population 203,191. The western side is occupied by the department of Aguadilla, 240 square miles, 99,645 inhabitants; and Mayaguez, 407 square miles and

127,566 inhabitants. The seven departments are subdivided into 69 municipal districts. The population of the entire island, according to the last census, was 953,243. Less than one tenth of the people live in cities. There are 264 persons to the square mile, about the same as in Massachusetts. In New York the proportion is only one half as great, in Ohio but a third.

Six miles southwest of San Juan is the wealthy inland town of Bayamón, in the department of the same name. It is built among comparatively small hills, and is on the line of the longest railroad in Porto Rico. Its streets are rather better than the average. It has a town hall, and those two signs of military and civil protection,—barracks and a jail. The 2200 inhabitants gain their support by raising cattle, sugar-cane, and tropical fruits. In the municipal district of which Bayamón is the center is Caparra, the first settlement on the island, and now called Pueblo Viejo, or ancient town. Among its interesting features is a massive and imposing ruin, the remains of an old church.

The picturesque little town of Rio Piedras is also a suburb of San Juan, seven miles distant. Here many business people from the city have their homes. It is a refreshing change from the hot warehouses to the airy apartments of this little town among the hills. The inhabitants number 2250. Here is the "summer palace" of the governor general. During the days of Spanish rule the large, low, rambling wooden building, densely shaded with mango trees, was the scene of much official activity. Later, when the American forces took possession of the island, it was put at their disposal and occupied by them. Just before the evacuation of San

Juan the building, and the garden belonging to it, became the headquarters of the United States soldiers.

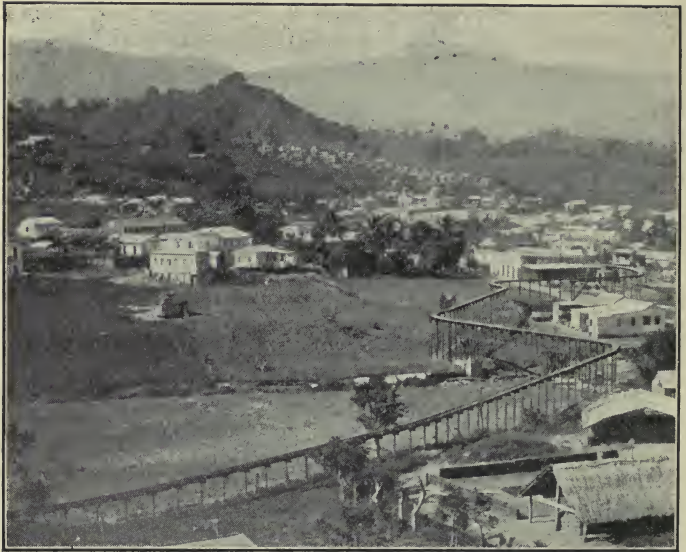
The department of Bayamón, of which these two towns are typical, has the largest proportion of inhabitants living in cities. This is due mainly to the fact that the capital itself is in this department. Yet here the city population amounts to only 29.2 per cent, showing how large a majority of the people live in rural communities.

Manati may be taken as a representative inland town of the department of Arecibo. It is seventeen miles east of Arecibo City, with which it is connected by the north-shore railroad. Among its interesting features is a broad and deep cavern known as "the Swallow Cave." Manati is about an average Porto Rican village in respect to thrift, though it is not noted for its cleanliness.

On the wagon road between Arecibo and Ponce is Utuado, with 3620 inhabitants. It is situated 1500 feet above the sea, and thus has the advantages of an invigorating altitude. During the recent war it was a place of encampment for a portion of the United States Nineteenth Regulars.

Out of a population of about 14,000 in the department of Arecibo, only 800 are negroes, 5000 are of mixed blood, the remainder being whites. There are also in Manati a few Chinamen.

The most attractive of the towns in the department of Aguadilla is Lares. Its charm is due chiefly to its superb situation, 1800 feet above the level of the sea. Its rich coffee plantations make it a prosperous region. One man is said to ship 1,500,000 pounds of coffee a year over the almost impassable wagon road to Arecibo.



THE CITY OF UTUADO.

A long, steep hill leads to the town, which is connected with the outlying country by several very steep trails. Approach from the coast side is difficult. In spite of its remoteness, the wealth of its soil for coffee culture renders it a thrifty town and the center of a wide-reaching trade. As many Castilian families have lived there in past years, the sentiment is strongly Spanish. The distance of Lares from the cities helps to render the inhabitants most hospitable to strangers.

Entrance into the town has been described thus: "As the day is dying, Lares bursts into view from the last hilltop, its white buildings glorified by the crimson sun. It is an exquisite scene, the little village with its high

cathedral, its red-tiled roofs and the smoke of evening fires burnished into gold by the setting sun. One long, steep hill into town, and the curious throngs in the streets watch us as we make a last gallant canter towards the barracks, and dismount gradually, but without assistance."

The fame of San Sebastian, eight miles to the west of Lares, is due to the sparkling waterfall, the warm spring, and the two great caves near by. It is not a commercial town, though coffee grows in great abundance in its neighborhood.

By many visitors to Porto Rico the department of Mayaguez is considered the paradise of the island. It fills the southwestern portion and faces the blue waters of the Mona Passage and the Caribbean Sea.

For historic interest and geographic beauty, San German ranks among the first of the inland towns. With its narrow streets, its ruined cathedral, said to have been built in 1511, and its picturesque groups of people, San German presents rare features for the practice of photographic art. A writer tells us that in the town there are old iron fences, tall and of elaborate design, fastened to massive stone pillars and inclosing tangled growths of tropical plants. There are plant-covered balconies on the houses of the better class, and artistic dilapidation and decay among the houses of the older portion of the town. The 4000 inhabitants live on a long, undulating hill. Below it widen out in fertile acres the lovely valleys of two rivers, within whose confines are found in luxuriance the products of the tropics,—coffee, tobacco, sugar, lemons, bananas, cocoanuts, and tamarinds. The place has a town hall, good school buildings,

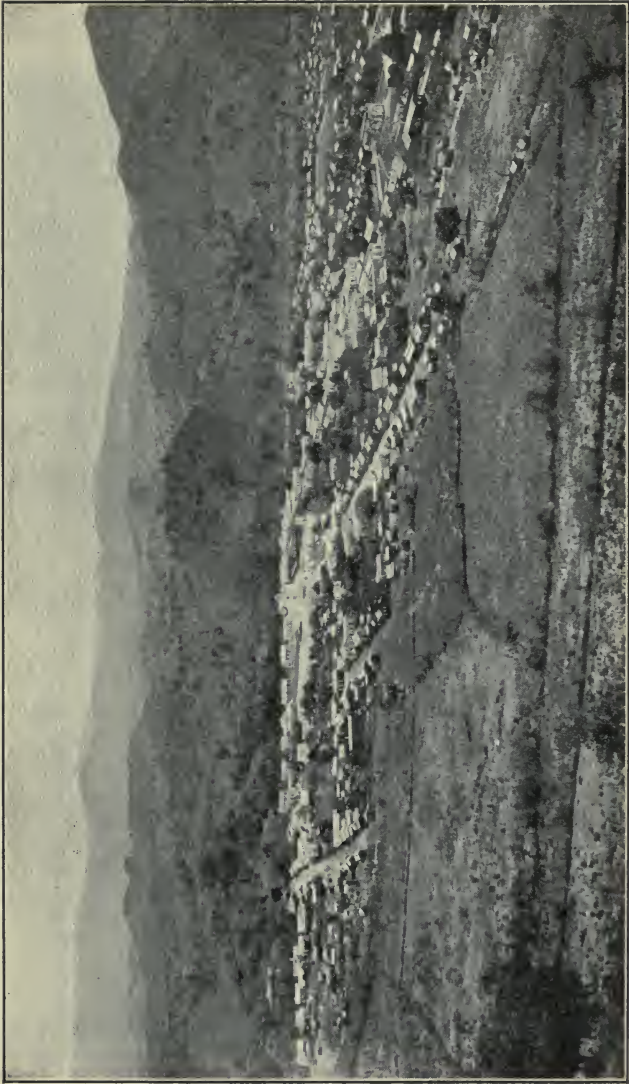
fine markets, hospitals, a seminary, and a theater. A railroad connects it with Mayaguez. Since 1877 it has been a city governed by a mayor and a board of councilmen.

Añasco, a town of 2483 inhabitants, is six miles from Mayaguez. The railroad which runs through its midst helps it commercially. The neighboring village of Rio Guanroba was the scene of the famous experiment by which the Indians, in 1511, tried to discover whether the Spaniards were immortal or not. After holding a representative of that nation under water for five hours they satisfied themselves that these people were mortal men and not above suspicion.

Coamo, in the department of Ponce, was founded in 1640. It is on the great military road between Ponce and San Juan, and is noted for its warm mineral baths. Not only do the people of Porto Rico visit the place to enjoy its healing waters, but many visitors come also from other islands in the neighborhood. The salt works of Coamo have been famous for more than a century. The town was reached and occupied by the American forces the second week in August, 1898, only a week after they landed at Guanica.

Any New England or western town of the United States, which had a constable for every twenty-four of its inhabitants, would be regarded as an unsafe place to live in. Yet this is about the proportion in the quiet inland town of Adjuntas, which is also in the department of Ponce. The officials can be seen on the streets at all times, in their suits of linen with narrow blue and white stripes, wearing belts and carrying swords.

That there are rough men in the town is evident from

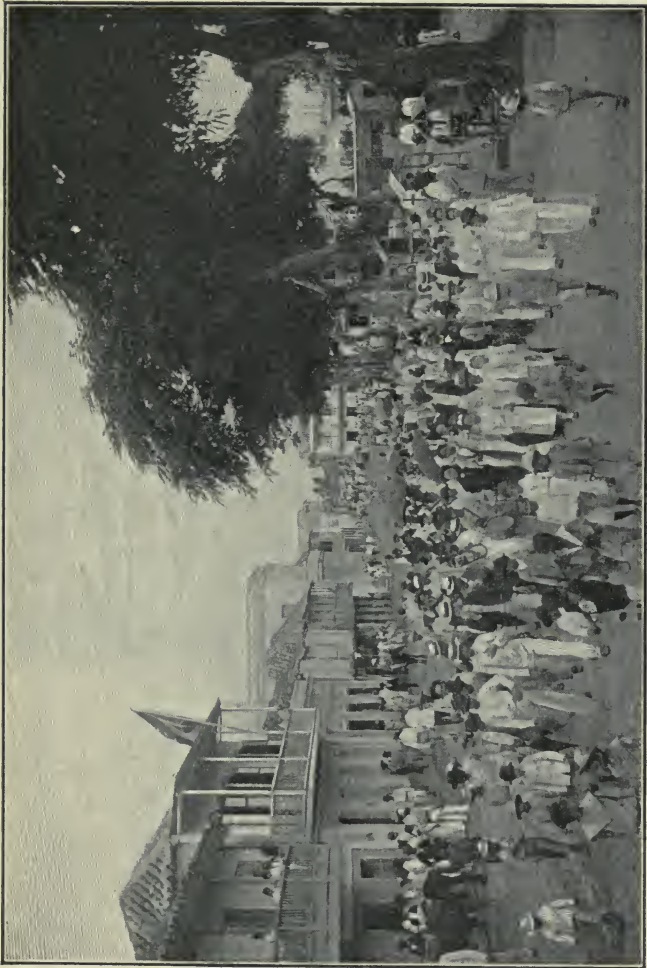


THE CITY OF COAMO.

the decorations of the strange "Black Hand," the token of Death, which have been placed on the doorways of many buildings. It is thought, however, that perhaps the mystic words are designed to arouse the curiosity of Americans, and perhaps to work on their feelings.

Adjuntas is situated twenty-four hundred feet above the sea and fifteen miles inland. It is a popular retreat for mountain-lovers. Although so high above the sea level it occupies a narrow valley, surrounded by steep hills. In the heart of the village an open space is turned into a public park, with cross-walks, shrubbery, and brilliant flowers. There are few good dwellings, most of the houses being mere cabins. The views of the mountains, with the abundant growths of coffee and other products, give the scenery about the town an attractive look.

The department of Guayama is on the southern side of the island, between Humacao on the east and Ponce on the west. A view along the main street of Caguas, the chief inland town, reveals a busy scene. All shades of human color, men of various size and different degrees of rank are to be seen. Here is the barefooted urchin with slouched hat, many sizes too large, pulled down over his ears; there the prosperous shopkeeper in suit of white and wearing a natty straw hat; here the dainty maiden from a wealthy home; there a poor creature in rags. Most of the houses are two-storied, the lower part being used as a shop, the upper part as a home. Outside the limits of the town are hundreds of inhabitants living in little palm-thatched huts, where the filth is hidden by the plantain trees round about.



THE MAIN STREET IN CAGUAS.

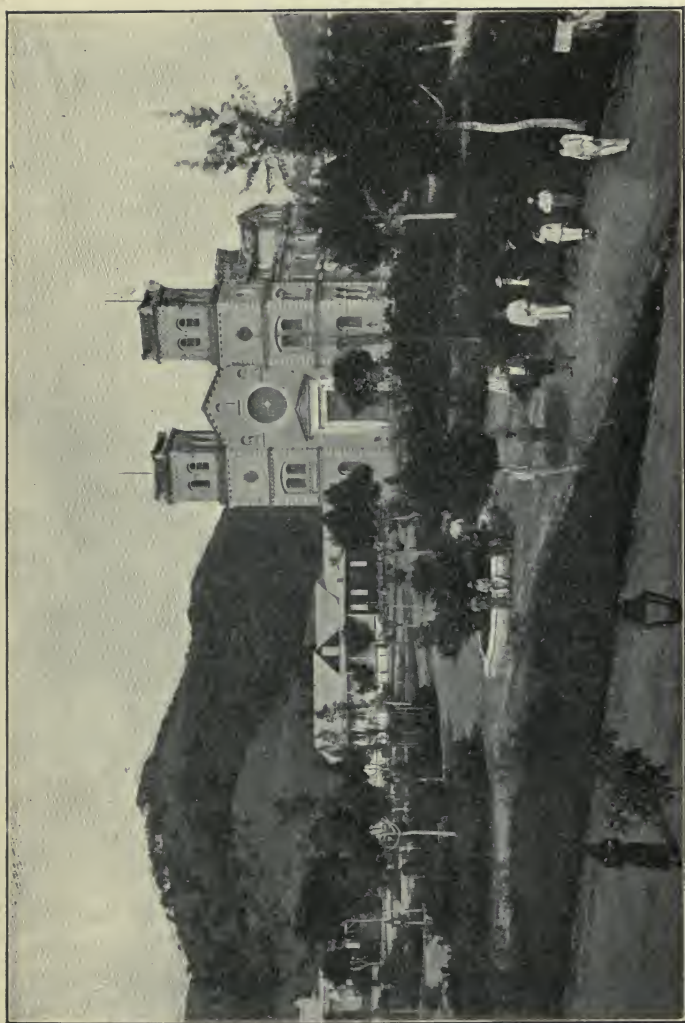
Cayey, a town of thirty-five hundred inhabitants, forms a charming picture as we approach. Few places on the island are so delightful for summer residence. Cayey is twenty-three hundred feet above the sea and halfway between the ends of the military road. Its situation will bring it commercial importance and make it a resort for seekers after a mild but invigorating



THE CITY OF FAJARDO.

climate. Tobacco has done much for the town in a commercial way, for Cayey is the center of the fine tobacco fields of that far-famed region.

The department of Humacao, on the eastern side, is only a little more than one fourth the size of Rhode Island. In slope and physical outline it resembles the state of New Jersey. It has no inland towns of particular importance. Fajardo, with its population of 3400, is representative of this part of the island. There is an



THE PLAZA OF GUAYAMA.

unreliable tradition that Columbus first landed near the spot where the little town of Naguabo is situated. The old settlement was attacked and destroyed by the Caribs in 1521.

The similarity of Porto Rican towns is evident. Agriculture is the business of the people, and manufactures as yet have little place in their industrial life.



CHAPTER XIV.

ROADS.

No country can prosper without good roads. Every form of progress and civilization depends upon open and well-built highways. They connect the field with the market; they bring the remotest portion of the interior into touch with the throbbing life of the seaport; they save time; they prevent the wear and tear of animals and wagons; they lessen the cost of food and clothing and secure a better quality of each; they bring the schoolhouse and the church nearer the home and provide better teachers and ministers; they promote social life and bring much closer to one another friends living at a distance; they make better citizens and aid them in the discharge of their political duties. The Roman road followed the Roman eagle.

Porto Rico possesses what has been called the finest road in the Western Hemisphere. It is the magnificent military road from Ponce across the mountains to San Juan. The tremendous task of constructing this road was begun in 1880 and was finished in 1888. To build

it mountain heights had to be crossed, gorges had to be spanned and rivers bridged, but the work was accomplished by the Spanish government with great thoroughness. The road is eighty miles in length, its highest point is three thousand feet above the sea, and it cost \$4,000,000. A large part of the work was done by gangs of civil and military prisoners who were paid but a dime a day. Thousands of other men were em-



THE MILITARY ROAD, NEAR AIBONITO.

ployed at thirty cents a day. The prisoners were under guard, a force of soldiers being always on duty to keep them from revolt.

The road is macadamized from end to end with finely broken rock of carbonate of lime, which packs into a smooth and solid floor. As a triumph of engineering skill it is equal to the finest roads in Switzerland. In

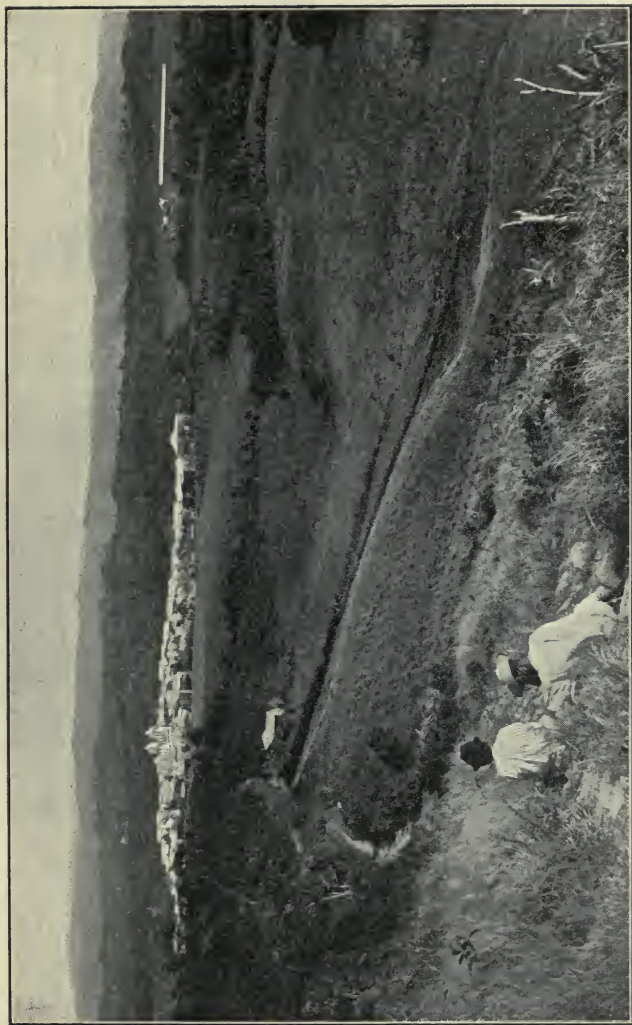
hardness and smoothness it is like such passes as the St. Gothard and the famous roads in the Engadine. It compares favorably with the wonderful road built by Napoleon, between 1800 and 1806, across the Simplon Pass, connecting the Rhone Valley in Switzerland with northern Italy. The cost of the two was about the same. Napoleon's road is but half the length of the



AIBONITO: A VIEW OF THE TOWN.

Porto Rican road, but its culminating point is twice as high. The Simplon road is in as good condition as it was the day it was built. The road in Porto Rico is likely to wear as well.

Every precaution is taken to keep the magnificent Porto Rican road in repair. It is divided into sections of from two and a half to three miles in length, each section having a brick guardhouse, usually square and



AIBONITO: A GENERAL VIEW.

one story high. In the guardhouses live the laborers, or peons, whose duty it is to repair the road. By the wayside are piles of stone with which a defect is mended as soon as it appears, not an hour's time being lost before the repair is made. Each peon is responsible for his section. To keep the road in repair costs \$15,000 a year.

The road has to contend with one stubborn foe. An occasional hurricane sweeps away bridges and covers larger portions with masses of *débris*. A single hurricane, in August, 1899, damaged the road to the extent of \$150,000. Under the pressure of a mighty flood ordinary trestlework will not stand. The only security for bridge builders in Porto Rico is in solid, massive, stone masonry.

The splendid highway follows a northeast course from Ponce, where the ascent begins. It winds in and out among foothills; it passes through arches of palms; it skirts clusters of dainty acacias, rubber trees, and tree ferns. We are charmed as we ride along, with the coffee, cane, and tobacco fields. Cultivated mountain and fertile vale enchant the eye. There is no rest season for it all; its beauty entrances at all times of the year.

Although this royal road extends to such heights above the sea, there is no part of it that cannot be traversed with a bicycle. We can make one continuous coast of eight miles without touching the pedal. The first town we reach, eight miles from Ponce, is Juana Diaz. It is a typical Porto Rican town, with rickety houses at either end of the village street, having the regulation open plaza, church, and in addition quar-

ries of gypsum and lime, and a curious cave. A few miles further on we reach Coamo, spread out over fertile plains and flanked by verdant hills. From Coamo on for several miles the road descends rapidly. Then begins the steady pull to the highest point. The roadway circles and turns, now causing the traveler to face the top of the hill which he is climbing, and again to move in exactly the opposite direction.

Aibonito, "Ah Beautiful," is the town at the top of the pass. From below the view is quite picturesque, but the



THE MILITARY ROAD, NEAR GUAYAMA.

closer approach disappoints, because of the dust and the filth.

At Cayey the road unites with the branch which runs southward to Guayama. The scenery at this portion of the road is enchanting. The hills are green with pasture

lands, and with mango, laurel, and other groves. The *flamboyant*, a large and spreading tree rich with great clusters of bright red flowers, blooms in the summer months.

From Cayey to Caguas tree ferns line the road; the slender bamboo nods and bows; fruit-bearing trees abound. It is a truly tropic world, where cocoanut and royal palm luxuriate. At Caguas we begin to feel that we are approaching San Juan. The descent is easy and gradual, and the journey is made in a short time. Little taverns are passed here and there, and peasant life may be seen in all its simplicity. It is poverty, but of a sort that is unconscious of itself. The people take life quite jauntily and smile at the chance passer-by.

At last the salt marshes appear, and beyond them the walls of San Juan. Walls of old masonry, built for the protection of the Spanish soldiery, stand along the road. On the east side as we enter is San Cristobal, and battered Morro Castle stands at the western end. This ride from Ponce to San Juan gives the best that the island can show. It reveals the scenery, the people, the pursuits, and the life as nothing else can do.

With the exception of the grand highway, and minor roads from Aguadilla to San Sebastian, from Adjuntas to Ponce, and a few others, Porto Rico has no good roads. And yet good roads are one of her greatest needs.

To develop a country whose roads average six feet in width is impossible. Add to this the fact that in rainy weather the wheels of the farm wagon sink deep in mud, and the condition becomes almost desperate. Often men and women may be seen bearing heavy baskets of

coffee to market on their heads. More common still is the small bony horse or donkey, floundering in the mire beneath a huge mass of merchandise, the driver sitting astride. In many places oxen have been choked in the mud. Some of the roads are nothing more than trails. When an American ambulance was drawn over the road between Yabucoa and Maunabo, it was considered by the natives a miraculous feat.

During the official visit of Dr. Carroll, Commissioner from the United States, the demand for good roads was louder than for anything else. The people of Arroyo sent the message, "Without good roads the riches of the island cannot be developed." From Ponce came an appeal on the ground that the roads to-day are in the same primitive state that they were when Porto Rico was discovered, four hundred years ago. Utuado based its request on the fact that the highways in use were retarding the country's growth and "sapping its life every day." While at Utuado Dr. Carroll was warned not to go to Lares without making his will. He says of the trip, "Mud holes and hillocks occur in each track, in such confused succession that while the fore wheel on one side is ascending, that on the other is descending, with the condition reversed for the hind wheels."

Mr. A. G. Robinson, who could "find no pleasure on board a Porto Rican pony," made the twenty-five mile journey from Yauco to Mayaguez by carriage. He writes: "I reached my destination in sections. I do not know if the whole of me arrived or not. My knowledge of anatomy is too superficial to enable me to determine whether some portion of my system does not, even now, dangle from some barbed-wire fence, or droop gracefully

among the cocoanuts at the top of some tall tree along the road. I have had much experience with the rocky roads of the mountains of western Carolina. I have loitered along hub-deep in the thick black mud of southern Illinois and Nebraska. But for rocks, mud, and general physical discomfort, the first fifteen miles of that road from Yauco to Mayaguez can beat anything of which I



AN INLAND ROAD.

know in the United States, ten to one. Once we mired down completely and had to be extricated by citizens of the vicinity. The horses lost their pluck; the driver lost his temper. At another point I saw that any attempt to go on would only result in the utter collapse of the horses. I ordered a halt for the purpose of investigating possibilities and probabilities." While engaged in the

proceeding a man with a pair of stout-looking black cattle came up. A contract was made, the cattle were yoked to the carriage and six miles of the remainder of the trip were made at a snail's pace. The spokes of the wheels at times sank entirely out of sight, "through the filling of the spaces with a solid mass of Porto Rican highway." Ten miles before reaching Mayaguez he found a better road and sweet relief from difficulty.

Porto Rican railways are in their infancy. Some years since, a French company began a system of railways to belt the island, a distance of four hundred miles. Of this distance only one hundred and thirty-two miles have been covered. The tracks are narrow gauge, and the rolling-stock is of an inferior quality. The entire outfit is primitive. There are three main divisions of the portion already constructed, the principal one extending from San Juan to Camuy, a distance of about seventy-four miles. Its chief stations are Arecibo and Bayamón.



CHAPTER XV.

THE FIRST AMERICAN CENSUS.

THE taking of the national census marks an important era in the history of a people. From the first census recorded in history, 1500 B.C., down to the census of 1900 in the United States, each enumeration of a people has marked the movement of its national life, whether forward or backward. The first census recorded the "sum of the congregation of the Children of Israel after their

families, according to the number of the names, every male by their polls." By the last United States census, the twelfth in our history, not only are the names of the men given, but also those of both women and children, together with the age, place of birth, occupation, ability to read and write, and many other important matters.

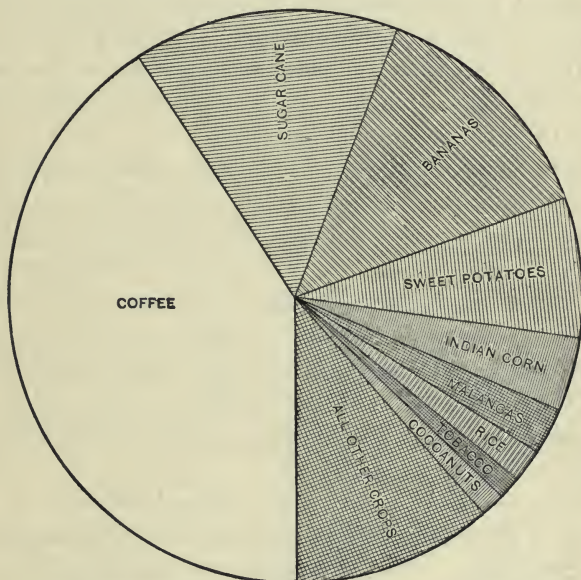
As soon as Porto Rico became a part of the United States, plans were set on foot for taking a census. It was necessary to know the exact number of people on the island, the proportion of males and females, the number of adults able to read and write, and the number of children needing an education. Home life, school life, as well as the business life of the future and the health of the people, depend upon the correct understanding of the actual condition of the island. How to multiply the products of the soil, how to increase the advantages of suffrage, how to promote good government, how to unite the interests of the people more closely, — the solution of these and a hundred other problems would be rendered much easier by a thorough census of the island.

An order was issued by the War Department, September 8, 1899, authorizing the taking of the census. The first article reads thus: "By order of the President, a census of the population, of the agricultural products, and of the educational conditions of Porto Rico shall be taken on the 10th day of November, and completed by or before the 20th day of December, 1899."

General J. P. Sanger, Inspector General, was appointed director of the census, with his office in Washington. The island was at once divided into seven census departments, with a supervisor appointed over each. The islands of Vieques, Culebra, and Mona were included in

the division. These seven departments were subdivided into 917 enumeration districts.

Promptly, on November 10, the task began. It was carried on under great difficulties. The rainy season and the hurricane of the preceding August had rendered intercommunication, in many sections of the



RELATIVE AREAS CULTIVATED IN PRINCIPAL CROPS.

(According to the Census of 1899.)

The following table shows the relative importance of the various farm products, expressed in percentages of the total area of cultivated land :

	PER CENT.		PER CENT.
Coffee	41	Malangas	2
Sugar-cane	15	Rice	2
Bananas	14	Cocconuts	1
Sweet Potatoes	8	Tobacco	1
Indian Corn	4	All other crops	12

island, well-nigh impossible. Yet in spite of all obstacles the work was completed within the prescribed time and in a thorough, businesslike manner. In his report General Sanger gives the names of 911 persons who assisted in making the enumeration. It was a test of intelligence and business capacity. The schedules contained a large number of definite questions, all of them requiring accuracy and good judgment in the enumerators. Sixty-two of them were women; this was the first time that women were given public employment, other than teaching, in Porto Rico.

Some facts of interest to the American people were brought out by this census. The population of Porto Rico is denser than is the case in any other of the West Indies except Barbados. There are 264 persons to the square mile. This is about the same as in Rhode Island. It is twice as many to the mile as in Pennsylvania, three times as many as in Maryland and Illinois, and more than seven times as many as in Cuba. In England there are 540 persons to the square mile, in Holland 384, in Ireland 141.

There are only about 2200 professional men in the island. Of these 200 are lawyers, 220 physicians, and 800 teachers. Nearly 200,000 of the people — two thirds of them women — have no employment whatever.

The center of area, that is, the point about which all parts of the island balance, is about three miles to the north and two to the west of the little town of Barros, thirty-one miles northeast of Ponce.

If the island were a flat surface without any weight, and it were loaded with the inhabitants distributed as

they were in 1899, each person being supposed to have the same weight, the center of population would be the point about which all parts of the island would balance. The center of population in Porto Rico is 66 miles west and 2.4 miles north of Barros.

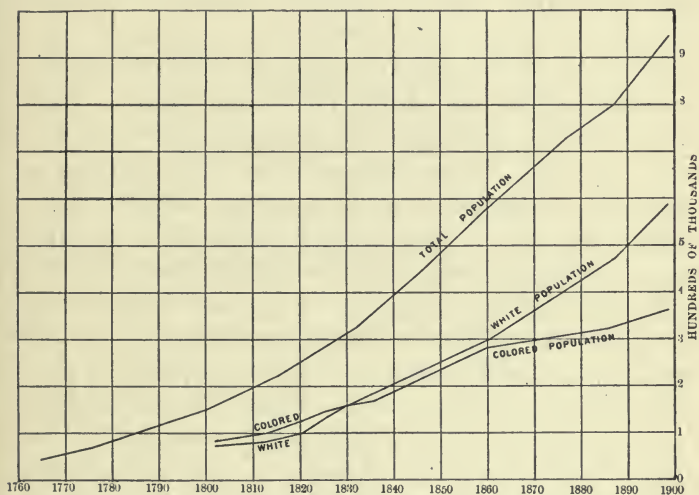


CHART SHOWING THE GROWTH OF POPULATION.

What is known as the median age is such an age that half the people are younger and half older. In the United States, according to the census of 1890, this age was 21.9 years. In Cuba it is 20.7 years. The median age in Porto Rico is 18.1 years. It is evident, then, that the people of Porto Rico are two years younger than those in Cuba, and nearly four years younger than the people of the United States. In one of the rural districts of the island, Bayamón, the median age is only sixteen years.

The census tables show that the number of children under ten years of age is larger, in proportion to the population, than in Cuba or the United States, or than any European country except Belgium. Of persons more than thirty years of age there are only forty in every thousand, while in the United States there are sixty-two.

There are fewer elderly persons in Porto Rico, proportionally, than there are in the United States. Only 2.6 per cent of the people of the island live to be seventy years old. This is due mainly to the fact that so many people disobey the laws of health, eat little nourishing food, live in ill-ventilated houses and fail to enjoy the pleasures of a wholesome and buoyant life.

In 1820 only four ninths of the population were white as against three fifths at the present time. The percentage of mixed blood is 83.6, while in Cuba it is only 52, in the United States it is 14.8 and on the island of St. Vincent only 1.8. It is said that there are few regions in the western hemisphere in which the native population is so large proportionately, the foreign-born so small.

These matters are noted especially as illustrating the nature of the census. They bring out the condition of the island, its people and resources, and the groundwork of fact on which all plans for improvement and development must be built. With the facts and figures gathered by the Porto Rican census in hand, the United States government will be able to start new movements which will result in the prosperity of the people in the home, the field, the school, and the legislative hall. Sanitary measures are demanded; a better water supply

must be provided; the death rate must be reduced; the marriage laws must be revised. That these and a host of other things are rendered, by present conditions, of the utmost importance, has been brought clearly to light by the results of this first American census in Porto Rico.

CHAPTER XVI.

THE SCHOOLS OF PORTO RICO.

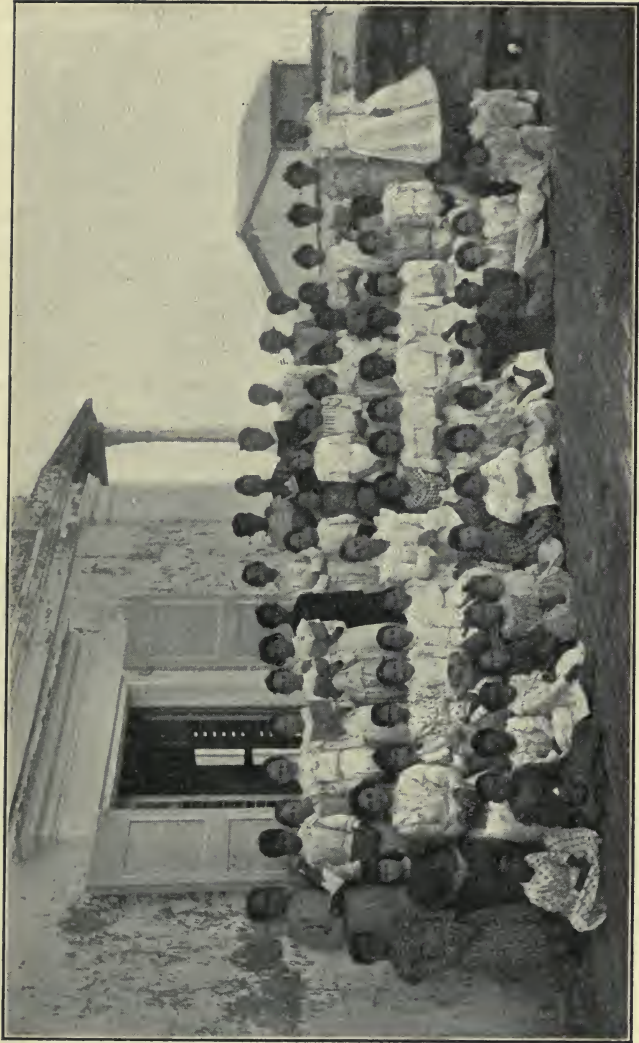
THAT was a bright day for Porto Rico, when, on October 1, 1899, free public schools were established after the American idea. The plan was devised by General John B. Eaton, who was appointed by our government the first Superintendent of Schools. General Eaton arranged that all young persons between the ages of six and eighteen years should receive instruction for nine months each year. The schools were to be supported by taxation. All who desired to study in this country were granted free passage on steamers coming to the United States.

Before our government took up the work the educational system of Porto Rico was in a very imperfect state. Schools were held in deserted buildings and in dwellings of the teachers, often in a poorly lighted room on the second floor, or in an unoccupied shop. There was no school furniture worthy of the name. The children of the island never knew what it was to study in bright and airy schoolrooms such as are found in our American cities and towns.

It may be worth our while to visit one of the schools

of San Juan as it was before the war. We will climb a flight of stairs and enter a small room over a shop. We should never think of its being a schoolroom, for it has no benches, no settees, no blackboards. Only the thirty boys sitting on the floor and the teacher at a desk remind us that we are visiting a school. The boys are bright, alert in body as well as in mind, and they listen closely to all the teacher says, for there are no schoolbooks, and all they get is what is said to them. The lessons are the simplest possible. Reading is not taught, as that is learned by the children at home. The principal studies, such as arithmetic and geography, the teacher dictates. The pupils are not taught to write. School hours are from eight to eleven in the forenoon and from one to four in the afternoon. There is no weekly holiday; school is in session every day except Sunday. Twice a year there are fifteen days' vacation.

A gentleman traveling in the island early in 1899 wrote as follows: "Everywhere the people are dissatisfied with their schools, and are ready to welcome good American schools and teachers. I have this day visited some half dozen colleges or public schools in the beautiful town of Mayaguez, said to be the best-built city in Porto Rico, and where the citizens are quite as progressive as anywhere else in the island. Here in Mayaguez, with its fifteen thousand inhabitants, there are perhaps a dozen public schools, half of them for boys and half for girls. There are from fifty to one hundred pupils in each school, and two or three teachers. There are no school buildings, but one, two, or three rooms in the house where the teacher lives are given up to the school. The course includes religion, arithmetic through fractions and



A PUBLIC SCHOOL AT MAYAGUEZ.

decimals, geography, grammar, the history of Spain, and geometry, by which is meant the ability to draw parallel lines and the various sorts of angles by eye." The writer adds that the reciting was by rote, parrotlike. The pupils, both white and colored, were quick to learn.

The government of Spain did nothing thoroughly or well in the direction of education in Porto Rico. That eighty-seven per cent of the people can neither read nor write speaks volumes for the neglect of the mother country in providing suitable school privileges. It was expected that when a boy reached the age of eight years he should go to a boys' school, and every girl to a girls' school. But this was not a law carried out and enforced.

When the United States began its educational efforts in the island there was very little to build upon. New foundations were laid, and the work was pushed rapidly forward. After two years our government made a very creditable showing as a result of its enterprise in establishing schools in the island. The census of 1899 showed that there were 322,393 children, between the ages of five and seventeen years. Of these only 26,212, or eight in every hundred, were attending school. It was found that the sum of \$1,500,000 was needed to build and furnish schoolhouses. Part of this amount has been provided. Experienced teachers who understand the Spanish language have been sent out, and the same branches are taught as in the schools of the United States. The children are eager to learn, and supplies of all kinds are provided, including blackboards, charts, books, paper, pencils, and maps. Each teacher has about fifty pupils under his care. At certain seasons of the year the children of the poor are obliged to work in the fields

Some are frequently kept at home to help in the care of the younger children. In many instances children are kept from school altogether for want of proper clothing.

The United States Commissioner of Education visited a school in San Juan in 1898, only two months after the island came under our flag. He found twenty-nine small boys in a room on the second floor. On the wall was a map of Europe, one of Spain, one of Asia, one of Africa, another of North and South America, and a map of Porto Rico. There were also arithmetic charts, cases of insects, and some good maxims on the wall. There were rough benches for the pupils and a rude desk for the teacher. A boy of twelve stood by the blackboard at work on an example in proportion. During the visit a reading lesson was given out in Spanish. When the boys were asked to whom Porto Rico belonged the response was loud and emphatic, "To the United States." The pupils were asked who could point out this country on the map. At once several of them rushed forward and placed their fingers triumphantly on the correct place.

The American flag now floats over every schoolhouse and is found in every schoolroom. The raising of the flag over the training school at San Juan, January 15, 1900, was a scene long to be remembered. The building was the first to be erected for the purpose, and is of great value to the industrial interests of the island. On that happy day, a great company of young people gathered about the building. Four persons were chosen to raise the flag, two young men on the platform below, and two young ladies on the balcony above. When the flag

reached the masthead a salute was given by both teachers and pupils.

A gentleman traveling in Porto Rico in 1899 wrote: "I was sitting in my room at the hotel at Lares, tired out after two days on pony-back, my first trip into the mountains of the interior, and my first experience on



RAISING THE FLAG AT THE FIRST AMERICAN SCHOOL, SAN JUAN.

horseback. My long ride, and consequent fatigue, my position, far from home, family, and friends, in a new region where language, food, customs, all were strange, made me feel most lonesome. Only a good night's sleep could ward off a threatened attack of homesickness, a longing to see the land and hear the language that God made, as the boys in blue express it.

"Suddenly a new sound aroused me, drew me to the porch, and brought a relief which only travelers who

have been far from the homeland can realize. Four young girls on the next porch, scarcely visible in the gathering darkness, were singing :

“ ‘Mee condree, tee of zee,
Sueet land of lee-bértee,
Of tee we zeeng.
Land were mee faders died,
Land of tee peel-greem’s pride,
From efree mountain side
Let freedom reeng.’ ”

Such sounds as these give promise of a Porto Rico soon to be, when the children of to-day will become citizens thoroughly educated in the principles of American liberty. The children all sing, and such singing, so hearty, so loud, so enthusiastic ! Music is assuming growing importance in the instruction given in the schools.

The eagerness of the children to learn is shown by the fact that some of them walk between two and three miles to school every day. Many of them bring chairs, benches, boxes, anything that will serve as a seat. It is hard to keep the children from studying aloud, a habit they have acquired under Spanish teachers. Some of the schools are far up in the mountains in the interior, and are seldom visited ; others, at certain seasons of the year, are cut off from the main thoroughfares by swollen streams. Some schools are in a part of the town where the voices of idle loungers on the street are constantly heard. In some cases the light is dim, or ventilation is bad, or the roof is leaky. Often that valuable article to every schoolroom, a clock, is not found ; and, in some cases, if there is one, the hands are so fidgety as to make it very uncertain just when it is time to have recess.



A PUBLIC SCHOOL AT ARECIBO.

Seeing the adults leading a humdrum life in their wretched homes, one would say that the people are stupid. Seeing the children in school and hearing them recite history and grammar, one would call them bright. General Davis, Military Governor of the island, says: "The Porto Rican is quick to learn; he has an acute mind. I have seen those in our school who picked up geography and arithmetic with great facility. I have known no more apt pupils anywhere than those native Porto Ricans, both black and white." He says, further, that every boy and girl in the island is anxious to learn English, and is as quick to get hold of a new language as any young person in the world.

Dr. Martin G. Brumbaugh, ex-Commissioner of Education for the island, tells us that, during the four hundred years of its control, the Spanish government built not a single schoolhouse. The department of education under our government announced that it would erect school buildings if the municipalities would donate suitable ground. To-day there are more than fifty wooden, brick, stone, and concrete buildings in use.

The dedication of these structures was in each case a gala occasion. The Commissioner of Education was usually present, accompanied by Governor Hunt and members of his cabinet. The children, dressed in costumes of red, white, and blue, sang "America" in English, the United States flag was raised by some official, and then the children sang "The Star-Spangled Banner." Formal addresses were made to the assembled citizens. In one place, where a rural agricultural school was to be dedicated, pupils from Bayamón were carried three miles in ox-carts. Fifty boys and girls stood in each cart, waving small flags, cheering the American republic, and singing its national airs. The eight carts formed a fine procession.

Dr. Brumbaugh relates several instances showing the sacrifices the poor people of the island are making to educate their children. Hundreds of boys and girls carry their shoes and stockings to and from school in their hands. In the mountain district above Corozal a boy was found wearing a shirt at least four sizes too large for him. Upon inquiry it was learned that he owned but one shirt, and this was being washed. Lest the boy be compelled to miss a day in school, his father gave his son his own shirt, and the only one he had. The father

carried on his head over the mountains, twenty miles and back, a case of merchandise, his bare back exposed all that time to the fierce rays of the tropical sun.

"These are but types," Dr. Brumbaugh adds, "of a zeal that is almost a frenzy on the part of the people to become educated. They are trying by education, by industry, and by obedience

to law, to prove their right to a place in the sisterhood of states. They are fondly looking for the day when the star of the beautiful island of the sea shall nestle in the folds of the flag they love as we do. They are learning what we must all learn with deeper meaning, that the door to statehood is the door of the free public school."



DR. SAMUEL M. LINDSAY.

Dr. Samuel M. Lindsay, who succeeded Dr. Brumbaugh as Commissioner

of Education when other duties called the latter back to the States, has taken up with energy and skill the work his predecessor felt compelled to lay down. The schools are reaching a higher state of efficiency and usefulness every month, and it is Dr. Lindsay's work, built on the foundation laid by Dr. Brumbaugh, that is accomplishing this end. The American teachers serve as earnest, helpful assistants in putting into execution

the plans the Commissioner suggests, to the measureless advantage of the children in the schools.

In the Lee mansion at Arlington, a few miles from Washington, is a wreath of flowers made of porcelain and prettily colored. In the center of the wreath are the words, "From the children of Ponce, Porto Rico, in enduring memory of General Guy V. Henry." This noble hero, made Military Governor at the close of the Spanish-American War, founded the schools of Ponce, and won the love and gratitude of the people. His death caused universal sorrow in that region. The schools established are an enduring monument to his memory, and this expression of appreciation on the part of the pupils is a touching incident, long to be remembered.



CHAPTER XVII.

MONEY AND THE EXCHANGE OF COIN.

IN money matters Porto Rico has had a number of unhappy experiences. In 1895 six million Mexican dollars, then in circulation in the island, were called in, and were recoined in the same number of pesos of less value. The new coin bore on one side the words, "Isla de Puerto Rico," and on the other side the face of the boy king of Spain. The difference in value amounted to more than a million dollars, which went into the coffers of the crown.

Soon after the island fell into the hands of our government, an order was issued that two Porto Rican pesos should be exchanged, temporarily, for one American silver dollar; but this was not quite just to the people.

It was based on the assumption that a peso was worth less than fifty cents, whereas its actual value is sixty cents. The plan was, however, decided upon as the only possible arrangement until Congress should take action.

On April 12, 1900, the United States House of Representatives passed an act providing "revenues and a civil



THE CITY HALL, SAN JUAN.

government for Porto Rico." The eleventh section provided that the coins then in circulation in the island be exchanged for United States money. This included the peso "and all other silver and copper coins." The value of the peso was to be regarded as sixty cents, and on that basis the exchange was made.

In accordance with government instructions, on the twenty-first day of April, Mr. James A. Sample, Chief of Division of Issue of the United States Treasury at Washington, with Mr. William P. Watson, sailed from New York, arriving at San Juan four days later. They proceeded at once to exchange the silver and copper coins of the island for United States money.

That their business might be perfectly understood, a circular printed in Spanish and English was sent out into all parts of the island. It described the principal features of the Act of Congress, and announced that the agents of the government had arrived and were about to begin their work. It named also certain agencies where money could be exchanged, the principal one being Messrs. De Ford & Co., of Boston and San Juan.

With eight wagouloads of specie, each drawn by four mules, and under a military escort, Mr. Sample and Mr. Watson traveled across the island from San Juan to Ponce. They speak in glowing terms of the splendid military road and the more splendid scenery. Mr. Sample says: "I have crossed the American Continent twice, I have seen the wonders of the Rocky Mountains, the Sierras and the Yellowstone Park, but nothing I have ever seen was so enchanting as the view in the heart of Porto Rico. The cultivated heights, the marvelously exquisite foliage, the royal palms, the superlatively beautiful flamboyant, the blue sea encircling all, presented a picture of rare loveliness never to be forgotten."

The people of the island were disinclined to accept any proposition of exchange. But Congress had taken action, and it was a matter of law that the circulating medium should be changed from the Spanish to the United States

specie basis. This required a change in standards. When, however, the ignorant people of the island found they were getting but sixty cents for what they had called a dollar, they objected. Yet they were in reality receiving the exact equivalent for their peso.

When the question was asked by the commission, "Will the people in the interior come forward with their Spanish currency and have it exchanged at the various authorized agencies?" the answer was, "The poor people of the interior have no money to exchange. They live from hand to mouth. What they earn they at



FORT SAN CRISTOBAL, OCEAN SIDE.

once spend. Most of their meager earnings go to support their families."

Considerable difficulty was encountered in the attempt to convince the people that the transfer was to be made

for their good. The commissioners were obliged to explain the situation and show the advantages the island would receive by the transaction. The people were informed that it would help them to become Americans; it would bind them to our government and would educate them in American ways. The courtesy and patience of the commission did much to overcome short-sighted opposition. There was much delay, however, in effecting the exchange, because of ignorance and blind adherence to old customs.

After completing the tour of the island, Messrs. Sample and Watson found that they had received 5,470,000 pesos, in exchange for which they had put into circulation \$3,428,544 of United States money. Since then more than 200,000 pesos have been shipped to New York. These coins have been taken to the mint at Philadelphia, and there melted into bullion and recoinced into the various denominations of United States money.

The redemption of Porto Rican coin has been accomplished at a cost to the United States government of one half of one per cent.



CHAPTER XVIII.

IN POSSESSION OF THE ISLAND.

ON the twelfth day of May, 1898, Rear Admiral Sampson bombarded the fortifications at San Juan, in order to test their strength. After three hours he withdrew his ships and cruised about in search of Cervera's fleet. Failing to find it, he returned to Cuba, whence he had sailed for Porto Rico.

After the magnificent victory of our forces on land and sea, as soon as a suitable escort could be obtained, General Nelson A. Miles, with about four thousand troops, left Cuba for Porto Rico with the purpose of seizing and occupying the island. All who followed his movements expected that he would sail to San Juan and attack the fortifications which guard the entrance to the harbor. The French cables had thoroughly advertised the supposed place of landing. This made it necessary for General Miles to change his tactics, and disembark where the Spaniards were least prepared for him. At the same time the troops must be landed where they could easily be carried to the shore.

July 25, 1898, he suddenly appeared before Guanica, on the southern side of the island. After a few shots from the gunboat *Gloucester* the town succumbed. The troops landed the next day and a light passage at arms followed. The soldiers then marched on to Yauco, and on the twenty-eighth of the month they reached Ponce, which surrendered without the use of either powder or shot.

The troops marching under the stars and stripes were received with huzzas. The people brought out from their houses flowers, fruits, and cool drinks, shouting enthusiastically, as they gave these to the soldiers, "Vivan los Americanos." Everybody wanted an American flag, and the demand was so great that General Miles sent to Washington for a fresh supply.

It was expected that strong resistance to the American forces would be made at Aibonito, because of the high and commanding position of the town. Before the town was reached, however, the war had come to an end.



CAMP OF LIGHT BATTERY M., SEVENTH ARTILLERY.

The protocol was signed at Washington, August 12, and the next day peace was proclaimed in Porto Rico. By the terms of the treaty, the Spanish government agreed to "cede to the United States the island of Porto Rico and the other islands which are at present under the sovereignty of Spain in the Antilles." It was further agreed that the Spanish authorities should at once leave these islands.

On the sixth day of September six commissioners met at San Juan to decide upon the details of the evacuation of Porto Rico and the neighboring islands under the dominion of Spain. Three of the commissioners represented Spain and three the United States. Rear Admiral W. S. Schley, Major General J. R. Brooke, and Brigadier General W. W. Gordon acted for our government. The conference was conducted in a mutually respectful and cordial manner, the Spanish commissioners treating the victors with characteristic courtesy. It was arranged that the eighteenth of October be made the day for the retiring of the old government and the incoming of the new.

In his report to the War Department, General Miles says, "During the nineteen days of campaign I kept the Spaniards guessing what the next move would be. When they withdrew along the line of the great military road between Ponce and San Juan they destroyed the bridges, obstructed roads and fortified strong positions in the mountain passes, and then were surprised to find that one column of my army was sweeping around the west of the island, capturing the principal cities and towns, while another had passed over the mountains and the trail which the Spaniards had supposed impassable,



A COMPANY OF SPANISH TROOPS.

and, therefore, had not been fortified nor guarded; and the first they knew of the march of the American army was the appearance of a strong brigade, within twenty miles of the northern coast, at the terminus of the road connecting San Juan with Arecibo.

“The island of Porto Rico was fairly won by the right of conquest and became a part of the United States. The sentiment of the people was in no sense outraged by the invaders. A people who have endured the severity of Spanish rule for four centuries hailed with joy the protection of the republic. One of the richest sections of country over which our flag now floats has been added, and will be of lasting value to our nation politically, commercially, and from a military or strategic point of view.”

The short and decisive campaign in Porto Rico was rather a disappointment to the American soldiers. They had come many hundred miles in hot and stifling transports, many of them had seen no fighting whatever, and yet they were suffering all the ills of a tropical climate in midsummer. What had they to show for their service to their country? There were serious obstacles to overcome, but these seemed to many of small consequence, as compared with the opportunity of facing the enemy on the battle-field, and achieving victory.

There were no more than four engagements during the campaign, although our troops were on the eve of several battles when peace was declared. General Wilson had come up the great military road almost to its summit and was at the door of Aibonito. General Brooke had made a flank movement from Arroyo and held the mountain town of Cayey in his grasp. The



THE GOVERNOR'S PALACE, SAN JUAN.

western portion of the island, from Aguadilla to Mayaguez and from Guanica to Yauco onward to Adjuntas and farther north to Arecibo, was in our possession.

Large numbers of Spanish soldiers were in the mountains. The Spanish troops lacked discipline, and their



GENERAL GUY V. HENRY.

officers failed to use the admirable positions which nature had placed within their reach. They could have caused the Americans endless annoyance, and could have hampered them in their progress, by stationing garrisons on the heights overlooking the narrow roads and firing upon the troops below.

The American soldiers on Porto Rican soil were, on the other hand, skillfully

handled. The army and its machinery moved like clockwork. As an officer under General Miles says: "People who speak of the Porto Rico campaign as a picnic, because results were obtained so easily, do not understand that there were plenty of difficulties, in fact, they have always confronted northern men making war in a rough tropical country. That these difficulties formed no

barrier to the success of the expedition is due to the perfection of plan and excellence of execution.”

It was a matter of rejoicing to all lovers of peace that the campaign in Porto Rico closed so quickly. The country was spared the devastation resulting from a long and bitter war, with the consequent ruin of crops, the stagnation of business, and the wrongs to the defenseless inhabitants.

The announcement of peace brought joy, apparently, to both the conquerors and the conquered. Troops from both armies freely mingled. The people saw in the coming of the American flag the dawn of a brighter day.

The campaign in the island, brief as it was, left some men wounded; others were reduced by malarial fever. These were sent north, leaving eight thousand troops under command of General Brooke, who acted as military governor. Late in 1898 he left the island, and General Guy V. Henry was appointed to take his place.



CHAPTER XIX.

SETTING UP THE NEW GOVERNMENT.

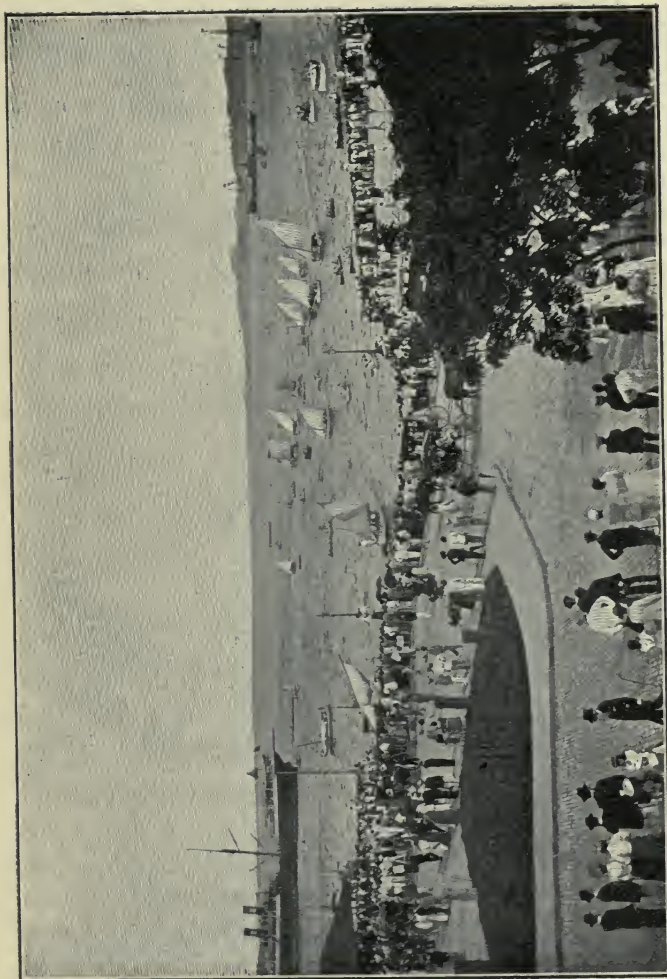
FOR 350 years Porto Rico was under the control of Spain. All public affairs were in the hands of the governor general, who reported to the Spanish king or queen. The condition of the people depended upon the personal character of the various governors. From the day (March 2, 1510) when Ponce de Leon, that cold and cruel master of men, began his career as governor

general, down to the October day in 1898, when Manuel Macias stepped down from the governor's chair, the record of the 117 governors of Porto Rico has been far from creditable to Spain.

The governor general controlled all civil and military affairs. He made the laws and acted as judge in interpreting them. He was president of the supreme court, and though a special jurist was appointed to decide legal questions, the governor could follow the advice of the jurist, or not, as he chose. The position was one of such power that its temptations were equally great. The spoils system was too often in general practice.

Up to August 28, 1870, the people had had no voice in the control of their own affairs. At that time the island was divided into districts, and twelve men were chosen by the people to oversee public works, roads, prisons, schools, etc. They were also to make up the annual estimate of expenses for their twelve judicial districts. Although they had no regular salaries, they were paid fifty per cent. of the taxes on commerce and industry, and they received a certain proportion of the earnings from raffles and lotteries. It was during the administration of these men that the island was divided into the seven departments already described. This system was kept up for four years, but in 1874 the old order of things was restored.

During the last ten years of the nineteenth century Spain was compelled to make a show of self-government in her West Indian possessions. This was attempted in Cuba and Porto Rico. In addition to the governor general and his cabinet, arrangements were made for



BOAT RACES IN SAN JUAN HARBOR, JULY 4, 1899.

an assembly to be elected by the people. The rights and duties of this assembly were very few. The system was started February 11, 1898. Eight months later our flag floated over the legislative hall of San Juan.

In Cuba the plan was a farce, and it was never fully installed in Porto Rico. The governor general held the reins in his own hands, as from the beginning there were what might be called a state treasurer (*intendente*), a military officer (*commandante*) over each department, and a mayor (*alcalde*) over each city; yet over all rested the authority of the high official at the capital, the governor general.

On October the 18th, 1898, at exactly twelve o'clock, Spain withdrew her troops from San Juan. It was a memorable occasion. As our soldiers stood waiting for the hour of noon, many eyes were lifted towards the bare flagpoles from which in a moment the stars and stripes would float. A peal from the sweet-toned bell on the cathedral near by told that the long-expected moment had come. Instantly the deeper strokes of the great clock on the City Hall were heard. The lighter and the heavier tones answered one another, until the last stroke of twelve had sounded. Then from every flagstaff in the city floated the banner that suggested to George P. Morris the lines,

“ The union of lakes, the union of lands,
The union of states none can sever.
The union of hearts, the union of hands,
And the flag of our union forever.”

A detachment of United States troops stood drawn up before the palace of the governor general, another body

of soldiers filled the plaza in front of the Chamber of Deputies and the City Hall. As the last echoes of the Spanish bugle died away from behind the guns of Morro and San Cristóbal, sixteen hundred Spanish soldiers marched out and down the crowded streets to the camp at Santurce. Their places were taken by Americans.

As the stars and stripes rose over the public buildings a shout of enthusiasm rose from the ranks of soldiers on the pavements beneath. Twenty-one guns were fired from the walls of Morro Castle. It was the birthday of Porto Rican freedom. The most thoughtful consideration was shown to the defeated, and the Spanish spirit was not wounded by show of bravado or self-glorification.

Major General J. R. Brooke, of the United States Army, was at once appointed military governor. He was succeeded, two months later, by Major General Guy V. Henry. General George W. Davis, who took General Henry's place the following May, created a bureau of state and municipal government, a bureau of internal revenue, bureaus of education, agriculture, public works, a judicial board, and boards of charities, health, and prison control. General Davis was a wise, economical, and progressive Governor.

By act of Congress, approved April 12, 1900, a special form of government was established in Porto Rico. The chief executive is called "The Governor of Porto Rico." He is appointed by the President of the United States, with the advice and consent of the Senate. He resides on the island, and holds office four years.

The President of the United States also appoints an Executive Council consisting of eleven persons,—a

secretary, an attorney general, a treasurer, an auditor, a commissioner of the interior, a commissioner of education, and five other persons of good repute. Five of the eleven must be natives of Porto Rico. This body of eleven men might be called the governor's cabinet.

The Executive Council is similar in many respects to our Senate. Corresponding to our House of Representatives there is a House of Delegates. It consists of thirty-five persons, five chosen from each of the seven districts into which the island is divided, as nearly equally as possible, according to population. The Executive Council and House of Delegates together make up the Legislative Assembly of Porto Rico. This assembly manages the civil affairs of the island. A bill may originate in either house. It cannot, however, become a law until it has passed both houses by a majority vote of the members of each house, and has been approved by the governor within ten days thereafter.

The President of the United States appoints a district judge, a district attorney, and a marshal, for each district, each for a term of four years. Regular terms of court are held twice a year at Ponce. Special terms may be held at Mayaguez when necessary. All proceedings of the court are conducted in the English language.

The prison system in Porto Rico was a disgrace to the Spanish authorities. When our government took possession of the island, the prisons were filled with prisoners who had been confined for years without trial, or awaiting sentence. Their condition was deplorable, both physically and morally. To-day the penal institutions are excellent. General J. P. Sanger tells us that they

“will compare favorably in point of sanitation with such institutions in other tropical countries.”

The civil government was established May 1, 1900. At sunrise on that day there were serenades by the bands of the Eleventh and Twelfth Cavalry and the Porto Rican regiment. There was music on the principal plazas of San Juan, and crowds of interested spectators and listeners were gathered together.

The troops began to assemble at eight o'clock. Later the governor-elect received in the plaza the United States infantry, cavalry, and artillery, as well as the sailors and marines, from the fleet in the harbor of San Juan, and the Porto Rico regiment.

At the executive mansion, on an extension of the balcony and in adjoining rooms, prominent residents of the island were assembled. The streets and roofs of buildings in the neighborhood were crowded with people, while General Davis, standing under a canopy of flags, gave his farewell address. In closing his speech he made use of these words :

“On this memorable occasion I make acknowledgment of feelings of the deepest gratitude to the people, for the hospitable reception and innumerable manifestations of cordial coöperation in executing the difficult tasks assigned to me and my military assistants. I deem it fortunate to leave the civil administration so many competent and efficient servants.

“Now, sir, to you, the first governor named for the post by the President in pursuance to the Act of Congress, I have the high honor and proud satisfaction of delivering to your keeping the government of Porto Rico.”

After prayer had been offered by the Bishop of Porto Rico the oath of office was taken by the Hon. Charles H. Allen, the first civil governor of Porto Rico appointed by the President of the United States. It was administered by the chief justice of the supreme court. The crowd applauded, and seventeen guns were fired from Fort Morro, Fort San Cristobal, and the fleet. Governor Allen addressed his hearers as the inhabitants of "the ever faithful island of Porto Rico," to whom he brought the good wishes of the United States. In the name of the President he promised that men of character and high standing would see that justice was done to all, and that their sole regard would be the welfare of the island. His closing words were: "Henceforth we are under one flag. We are under the same institutions of freedom, equality, and education. Together we move on in the great American current of advancing civilization. Loving our country, animated by a high sense of honor, devoted to a common humanity, we take our place before the world and invoke on our progress the blessing of Almighty God."

At the conclusion of this eloquent address Chaplain Brown pronounced a benediction. The infantry band played "The Star-Spangled Banner," and the inauguration of the first governor of Porto Rico was at an end. Since the day of these interesting ceremonies the new government in the island has come into successful operation.

The question is often asked of Porto Ricans, "How do you like being Americans?" The answer is almost always, "We like it." It was the wish of the United States government to make changes slowly, and not to offend the feelings of the people so long accustomed to

a fixed form of government. Spanish arms, Spanish laws, Spanish schools, Spanish methods of agriculture were everywhere apparent. To introduce changes required time.

In one respect an unexpected change came with the new order of things. The people had always been accustomed to much ceremony; the officers wore conspicuous uniforms; when the governor general appeared in public, it was with much demonstration. But when the Hon. Charles H. Allen landed at San Juan to assume the duties of his new position, he was not arrayed in a splendid uniform with brass buttons, insignia of rank, a helmet, a sword, and accompanied by a bodyguard of United States soldiers. He wore a plain suit of citizen's clothes and a straw hat. This was a surprise to the people, something of a setback. They were so absorbed in watching for the next move, or in looking for the governor himself to appear in imposing regalia, that they could not cheer. It was their first lesson in the simplicity of a republican form of government.



HON. CHARLES H. ALLEN.

It is the general opinion of those who know the island best, that the people are not yet ready for self-government. It seems absolutely necessary that the control of affairs should be shared both by Americans and Porto Ricans. The natives should have a prominent part in managing

their own affairs, and our power over them should be made use of only when necessary.

Major Azel Ames, of the United States army, believes that the people are fast getting ready for self-government. He says they are very anxious to learn. He tells incidentally of a cook whom he found sitting on a hard stone floor, taking lessons in English of a St. Thomas negro, at a cost of two cents a lesson.

A native of the island says: "I have four sons whom I am educating in English. I expect that they will be loyal citizens of the United States. I cannot live many years longer, but I want to see them go to the front in loyalty and coöperation with the government of the United States for the future of those here." This spirit will make patriotic Americans.

There seem to have been so far in the affairs of Porto Rico since American occupation, three stages of public opinion: First, one of *enthusiasm*, which began when the United States took possession of the island, and a bright future seemed to open for all industries. Second, a stage of *discouragement*, growing out of the tariff law, the severe hurricane of August 8, 1899, and the failure to market the great staple products to any pecuniary profit. Third, the stage of *reconstruction*. Recovery from the losses and the waste, from disappointment and despair, has fairly set in; the latest crops are unusually large; the schools are increasing in number and becoming constantly better; the second sober thought is one of hope and courage.

At the close of his first year as chief magistrate of Porto Rico, Governor Allen made his annual report to the President of the United States. In this report he

encourages young men to settle in that island. He says that property is as well protected there as in the United States ; the forms of court administration are as good ; there is a surplus of laboring men, accustomed to the tropics, and adapted to the kind of work to be done. "It is my feeling," says Governor Allen, "that the business man will come here not only with his capital, but with the push and energy which always accompany his undertakings, and, with the coöperation of the native, he will proceed to make at least five spears of grass grow where one has grown before."

Governor Allen resigned, Sept. 15, 1901, and the Hon. William H. Hunt became governor of the island.



CHAPTER XX.

THE EARLY INHABITANTS.

THE original dwellers in Porto Rico belonged to what is known as the "Stone Age." We know them principally by such stone implements as may be seen at the Smithsonian Institute at Washington. These implements are of curious design, and it is difficult to tell for what purpose some of them were made. There are celts (small hatchets), smoothing stones, stools, beads, cylinders, amulets, masks, collars, etc. The historians who write of the voyages of Columbus speak of stone-tipped arrows and arrows tipped with bone, teeth, and shells.

The hatchets at the Smithsonian are of thorough workmanship, beautifully shaped and polished, and they are of various colors — black, white, green, brown, and slate colored.

An early writer, describing a visit of Spaniards to Porto Rico, says that they found a town of a thousand inhabitants. The principal men came out to meet them, and leading the visitors by the arms into the town, they caused them to sit down upon curious seats. Each seat was made of a solid piece of wood carved in the shape of a beast. The legs were very short, and in the head were set eyes and ears of solid gold. The Indians sat about on the ground. Specimens of just such stools as these may be seen in the collection of Porto Rican relics at Washington.

There are certain stones carved in the form of a human being holding up a mountain. One end of the stone is cut to resemble the human face. The feet at the other end seem to be curled up in a bunch. The use to which these stones were put is not known.

Of all the relics from Porto Rico, the queerest are the collars, so called from their resemblance to horse collars. They vary in size from a heavy oval to slender, pear-shaped collars. They are made of stone and are from 19 to 23 inches in breadth, and some of them weigh as much as 65 pounds each. They have been found nowhere except in Porto Rico. The carving on some of the collars is of the finest workmanship. As some are better finished and have more ornamentation than others, there was probably a distinction in their use. Strangely enough, some were evidently made for the right shoulder and others for the left. Professor O. H. Mason, who has made considerable study of Porto Rican relics, says he does not know whether the collars were worn by victims sacrificed upon the altar, or by military heroes, or how they were used.

A Porto Rican priest, who has given the matter some attention, thinks that they were to be buried with the body in the grave. Carving on stone was such a slow process that it took years to prepare a collar for the time of burial. By the time the owner died he had it ready for his tomb. It was placed over his head and rested on the breast. It served as a sacred charm; no



RUINS AT PUEBLO VIEJO, PORTO RICO'S FIRST TOWN.

hands on the earth or under the earth, the natives believed, dared rifle the tomb containing this sacred object.

Mr. F. Bidwell, British Consul to the island in 1879, has published an account of the Porto Rican Indians of the early days. From his narrative the following facts are taken:

The Indians of Porto Rico paid homage to a guardian spirit called *Cemi*. The spokesman of this spirit was the

medicine man, who acted as a priest, also. The medicine men declared war or proclaimed peace, arranged winter and summer, gave sunshine or rain and whatever else was needed. The *Cemi* always said exactly what the medicine men wished him to say. When promises made were not fulfilled, they said that the *Cemi* had changed his mind for some good reason of his own. The *Cemi* was only another name for the medicine man himself, who always said what the *cacique* or chief of the tribe wished him to say. Each *cacique* had under his charge a small district, which usually included the people living in a single valley, and over all the smaller tribes was the head *cacique*. At the time of the conquest of Spain the head *cacique* was Aqueybana.

Their forms of marriage are unknown to us, but it appears that each man had more than one wife, while the chiefs had more than any of their subjects, one being the special favorite. As a mark of affection those best loved were buried alive, upon the death of their husbands. If they did not offer themselves voluntarily, they were compelled to give themselves up to death against their will.

The Indians painted their bodies, using for this purpose oils, gums, and resins taken from trees and plants. They appeared at public assemblies, military parades, and powwows, in a tattooed state. Fantastic ornamentations and trimmings were a part of the dress. Huge headdresses of gayly-colored feathers added to the effect. They wore small plates of gold on the cheeks, and huge shells, precious stones, and relics hung from their noses and ears. Every Indian had about his person an image of the god *Cemi*. The chief was distinguished from his subjects by the large gold plate on his breast.

Their houses were built upon logs driven into the ground. Upon these the floor, made of cane or sticks, was laid. The walls were of cane, bound together with palm leaves and bark, and meeting in the center like the poles of a tent. There were neither chimneys nor windows, light being admitted by the door only. In the very best of these huts, airholes or windows were left in the cane.

In some parts of the island just such frail huts can still be found. They are above ground, that the inmates may avoid the dampness which at certain seasons of the year chills the body, often causing fevers.

The Indians lighted their fires by means of three sticks. Two of the sticks were tied together at one end. The point of the third was laid against the ends of the others, and they were beaten together between the palms of the hands, until a flame was produced.

In place of bedsteads they had hammocks, called *hamaca*; their cooking utensils were made of gourds. They hewed canoes out of the trunks of trees; from these they fished in the rivers. Some of the largest canoes, which held from forty to fifty men, were used for sea voyages. The Indians fought with bows and arrows, and in warfare they used also a long wooden weapon somewhat resembling a scimitar.

The people lived an idle and aimless life, doing just as little work as possible. They cultivated only sufficient supplies for their bare support, the chief products of the soil being plantains, sweet potatoes, and maize. The women took care of the gardens, while the men spent their time in hunting and fishing. As relishes for their scanty table they ate insects, and even lizards

and bats. They had neither money, nor weights and measures. They hated stealing, and punished the thief with death.

We know from the presence of the images, everywhere found, that the Indians were devout worshipers of their god Cemi. Each district had its temple, and there the idol was placed. To these places of worship the caciques went with the medicine men. The latter hid behind the idol and expressed by word of mouth the will of the chief. The food taken to the Cemi was eaten by the priests. Stone or clay images of the god were also kept in dark corners of the houses, and to these the people prayed at certain stated times.

They believed in two invisible beings;—one was naturally benevolent, and neither prayer nor supplication was required to obtain his favor. From the other invisible being misfortune, trouble, and calamity were to be feared, and offerings and prayers to him were necessary in order to relieve hunger. The Indians regarded him as the enemy of mankind, the being from whom all evils sprang. They cast themselves prostrate before their god and sprinkled certain kinds of powder on his head. The stone images of Cemi were handed down from father to son. Some of these images have been found in quite recent times. Their resemblance to each other serves to prove the unity of the religious belief, while the existence of these images in various places, both on the coast and in the interior, shows that the island was inhabited in all directions. It is believed that skeletons of some of the Indians may still exist in caves and grottoes not yet explored.

The natives believed in a future life. They pictured

a land of supreme delight, where there was eternal spring and where they would find beautiful forests filled with game and watered by rivers abounding in fish.

When one of the chiefs became sick the priest-doctor was called. He performed several ceremonies, partaking meanwhile of the same diet as the sick man. If he did not comply strictly with this and other obligations, and the man died, the friends and relatives of the de-



SAN FRANCISCO CHURCH, SAN JUAN.

ceased put out the doctor's eyes, or inflicted other punishments upon him.

When the Indians saw that a sick person was near death they suffocated him, even if he was a chief. After death they opened and dried the body by fire and buried it in a large cave, together with some living women, the

bows and arrows of the deceased and provisions for his journey to the other world. Sticks and branches of trees were then placed on the top, and the whole mass was covered with earth, which was thus kept from the bodies of those buried within.

The dance was an important feature of the life of the Indian. It was a most serious ceremony. If war was declared the dance expressed vengeance; if the wrath of Cemi was to be softened, the death of a friend to be lamented, or the birth of a son celebrated, the special dance was introduced which expressed the particular emotions of the heart. If an Indian was ill, they danced in order that he might recover; the medicine man dancing for the patient, if he was too weak to do it himself. The war dance surpassed all others in signification, in quickness of movement, and in intensity. It represented the departure of the warriors, their entry into the enemy's country, precautions as to camping, ambuscades, surprises, the rage of the conflict, the shouts of victory, the capture of prisoners and entrance into the victor's country. Each dancer was as much in earnest as if he were actually on the field of battle.

The musical instruments were rude and had a harsh, sing-song sound. Drums were made from the hollow trunks of trees, other musical instruments out of the gourd.

The Indians had a game of ball, in which women took part. When not occupied with dancing or necessary labor, the men passed their time in smoking, seldom speaking a word.

CHAPTER XXI.

HISTORICAL SKETCH.

CHRISTOPHER COLUMBUS, in a private letter to the King of Castile, wrote that navigation "is the art which they should pursue who wish to know the secrets of the world." His own enthusiasm for exploring the world's secrets we know, because six months after his return to Spain, at the close of his first voyage, he was out on the ocean again, sailing to the westward. He was far better equipped for this second voyage than for the first. The earlier fleet was composed of three caravels, and only 120 men. He set forth on his second expedition with seventeen caravels and a force of 650 men.

Voyaging was slow in those days, and although the brave adventurers sailed from Spain, September 25 (1493), it was not until forty days later that they reached Santo Domingo, their first landing place.

While cruising in the northern waters of the Caribbean Sea, on November 16, Columbus, by this time an admiral, caught sight of land. It was the southeastern corner of Porto Rico, now known as Cape Mala Pascua. The explorers sailed along the southern shore, rounded Point del Aguila, and proceeded up the western side of the island. Turning towards the northeast they landed at Aguada.

Columbus at once took possession of the island in the name of Spain. He planted the cross in the sand and called the island San Juan Bautista, in honor of John the Baptist. The landing place is to-day marked by a

granite monument erected by the people in 1893, just four centuries after Columbus discovered the island. The monument, which is in the form of a cross, bears the inscription, — 1493 — 19 de Noviembre — 1893 —.

After remaining in the island several days, Columbus returned to Santo Domingo. There is no record of a second visit to Porto Rico. When he had founded a colony in Hispaniola he returned to Spain.

An ambitious man, Ponce de Leon, who had accompanied Columbus on his second voyage, remained behind in Santo Domingo. After trying in vain to find in Florida the fountain of perpetual youth, de Leon sought for gold in Porto Rico. He sailed from Santo Domingo in 1508, with a single ship, a small party of Spaniards, and a few Indians to serve as guides. Upon his landing at Aguadilla he was kindly received by the unsuspecting chief Aqueybana, who conducted him to various



A VIEW OF AGUADILLA.

(The cross marks the location of the monument erected at the place where Columbus landed, November 19, 1493.)

parts of the island. Having assured himself beyond a doubt that the island abounded in gold, de Leon went back to Santo Domingo and reported to Governor Ovando.

The governor decided to conquer the island, and he accordingly sent over an expedition under Ponce de Leon to do the work. This bold but cruel and unprincipled leader quickly brought the simple, unwarlike Indians under his sway. A year or two later he founded, near the present site of San Juan, a town which he named Caparra. The town was afterwards called Porto Rico. In



THE MONUMENT MARKING THE LANDING PLACE OF COLUMBUS.

1521, by command of the King of Spain, the capital was transferred to its present location. Some years later the name of Porto Rico was given to the island, and the name of San Juan to the capital.

Ponce de Leon, who had been appointed governor of Porto Rico, took up his official residence at Caparra. From there he began his work of subduing the island. He established a village at Guanica, on the southern side, which was abandoned on account of the ferocious mosquitoes and the unhealthful climate. A town was then founded where Columbus landed, at Aguada, and another at San German.

The new colonists began their search for gold by opening the mines. The native Indians were treated with contempt and brutality. They were made to do all sorts



PONCE DE LEON STATUE AND PLAZA, SAN JUAN.

of work — burn lime, wash gold from the sand, and perform other kinds of menial labor. Finally, the native chiefs rose in revolt and a bitter rebellion broke out. At first they threatened the safety of the colony, so that

the Spaniards were compelled to withdraw to the eastern side of the island, near San Juan and Caparra. But the bows and arrows of the Indians of Borinquen (the name given to the island by the natives) were no match for Spanish arms. As soon as Ponce de Leon attacked the unskilled Indians, the tide quickly turned. He



COLUMBUS MONUMENT, SAN JUAN.

was victorious in every battle, until the rebellion was ended by the death of the principal chief. The submission of the Indians was complete, 5500 of them being made slaves.

The number of people on the island when it was invaded by the Spaniards is supposed to have been about 100,000, although some give the population as 600,000.

When the Spaniards first took possession, "it was," as an old writer says, "as full of people as a hive, and as beautiful and fertile as a garden." Under the Spanish oppression the entire native population was swept away. Some of the Indians were taken as spoils of war, many fled to neighboring islands, some took their own lives, others were carried off by smallpox. On April 20, 1543,



CASA BLANCA, SAN JUAN.

the King of Spain ordered the Indians to be freed. A year later the Bishop of San Juan informed his majesty that "Indians, young and old, natives of the island, who had been granted such mercy, numbered sixty."

The beauty of Porto Rico, its resources and treasures, and its central location, made it appear very desirable to the great nations of Europe. The first effort to take the island from Spain was made by Sir Francis Drake.

He attacked San Juan with a fleet of twenty-four ships, and, after a sharp engagement, the city was captured and burned. In 1597 the Earl of Cumberland blockaded and captured San Juan and took possession of the island. Owing to an epidemic of yellow fever, which took away many of his troops, he withdrew. Before doing so, however, he burned the city to ashes and massacred many of the inhabitants. He carried off seventy-two pieces of artillery.

The Dutch under Baldwin Henry tried to obtain control of the island in 1615. Although this leader had with him seventeen ships and twenty-five hundred men, his siege of twenty-eight days was of no avail, and the Dutch were driven away, with serious loss.

The next unsuccessful attack was made by the French in 1626. In 1696, a large British fleet attacked the capital but was itself destroyed by a hurricane. A century later a British squadron with sixty-five hundred men, under Lord Abercrombie, opened fire on San Juan, but withdrew after a fortnight's siege. After that time no hostile vessel approached San Juan, until the opening of the Spanish-American War.



CHAPTER XXII.

RELICS OF THE WAR WITH SPAIN.

THE City of Washington presents few attractions equal to the National Museum. It is a treasury of relics illustrating American history. Beginning with the earliest stages, it follows the course of events through Pilgrim days, the French and Indian wars, the Revolu-

tion, the War of 1812, the Mexican and Civil wars, down to the present time. To continue the historical data, Mr. W. F. Holmes, head curator of anthropology in the museum, conceived the idea of having a man, familiar with the scenes of the Spanish-American War, collect material for this department. Mr. Paul Beckwith, who was selected for this purpose, has gathered together many interesting relics, which bring the annals of American history up to date.

Trophies of this sort are like the crops; they must be harvested at the right time or all is lost. Mr. Beckwith was in the war and seized upon his opportunity promptly. As a result the museum has several large cases in which there are many relics of the late war with Spain. Among them are fragments of shrapnel from the American battery, and the shell which exploded in the rifle pits of Aibonito Mountain, killing several Spaniards.

The bombardment of San Juan, May 12, 1898, left its mark on the buildings of the city. Pieces of shell, which burst in the streets or exploded in the church of San Francisco de Assisi, are to be seen in the museum. Relics of Spanish control are found there: revolvers used by the custom-house guard at Ponce; also specimens of the machete, some short and curved, some long and pointed like a general's sword. One can bend this fine Toledo blade so that the point will touch the hilt without breaking. Silver insignia of Spanish military rank — buttons, and numerals marking the regiment of each soldier — are exhibited. Such badges as the clover leaf serve to note the rank of the officer.

Among the grim souvenirs to be found in this collection are leg shackles used by the Spaniards to bind

slaves previous to the emancipation proclamation of 1868. The breaking of the iron chain of slavery left the ignorant classes in need of many reforms: their daily wages were low; their children were brought up in ignorance. We have seen how much our government is doing to correct these evils.

The most interesting relics of Porto Rico at the National Museum are the keys of forts, and flags, ensigns, and banners taken from the Spaniards. Especially to be noted is the flag lowered from the Custom House at Ponce, when the city surrendered to the United States forces. The yellow stripe of this had been painted red to mislead the Americans. The flag from the military headquarters at Arecibo, and the flag captured at Coamo are also found in the collection. There, also, is the flag that floated over San Cristobal, May 12, 1898, during the bombardment by our fleet under Admiral Sampson. The upper right-hand corner shows the royal standard of Spain.

These relics of the Spanish-American war make very real to us the leading events of that struggle, so unexpected and forming so important an epoch in American history.

A visit to the National Cemetery at Arlington will heighten the impression and make more vivid the conflict of 1898. There, side by side with the heroes of the Civil War, are the soldiers of the Spanish-American War. One part of the cemetery is set apart for the bodies of the heroes who died in Cuba and Porto Rico. There also repose the bodies of the men who neither fell in battle nor died in hospitals, but were killed in that awful catastrophe, — the destruction of the battle ship *Maine*.

PRONUNCIATION OF FOREIGN WORDS.

KEY.

ä as a in *far*.
 ā as a in *fate*.
 ě as e in *met*.

ē as e in *me*.
 ō as o in *tone*.
 oo as oo in *ooze*,

Adjuntas, äd-hoon'-täs.
 Aguada, ä-gwä'-dä.
 Aguadilla, ä-gwä-dël'-yä.
 Aguas Buenas, ä'-gwäs bwä'-näs.
 Agueybana, ä-gwä-ē-bä'-nä.
 Aguila, ä'-gwē-lä.
 Aibonito, ä-ē-bōn-ē'-tō.
 Alcalde, ä-l-cäl'-dä.
 Alganabo, ä-l-gä-nä'-bō.
 Añasco, än-yäs'-kō.
 Annatto, än-nät'-tō.
 Antilles, än-tël'-yāz.
 Arecibo, ä-rä-sē'-bō.
 Arroyo, är-rō'-yō.

Ballaja, bäl-yä'-hä.
 Barceloneta, bär-sä-lō-nä'-tä.
 Barros, bär'-rōs.
 Bayamón, bä-yä-mōn'.
 Boquerón, bō-käi-rōn'.
 Boquilla, bō-kēl'-yä.

Cabo Rojo, kä'-bō rō'-hō.
 Cacique, kä-sēk'.
 Caguas, kä'-gwäs.
 Caja del Muerto, kä'-hä däl moo-är'-tō.
 Camuy, kä-moo-ē'.
 Caparra, kä-pär'-rä.
 Cayey, kä-yä'.

Ceiba, sä'-bä.
 Cemi, sä'-mē.
 Cerro Montuoso, sār'-rō mōn-too-ō'-sō.
 Cervera, sār-vä'-rä.
 Cinchona, sēn'-chō-nä.
 Coamo, kō-ä'-mō.
 Comandante, kō-män-dän'-tä.
 Concejo, kōn-sä'-hō.
 Cordoba, kōr'-dō-bä.
 Corozal, kō-rō-säl'.
 Culebra, koo-lä'-brä.

Desecho, dā-sä'-chō.
 Dorado, dō-rä'-dō.

El Asomanta, ēl ä-sō-män'-tä.
 El Yunque, ēl yoon'-kä.

Fajardo, fä-här'-dō.

Guanabana, gwä-nä'-bä-nä.
 Guanajibo, guä-nä-hē'-bō.
 Guanica, gwä-nē'-kä.
 Guanijiro, gwä-nē-hē'-rō.
 Guayama, gwä-yä'-mä.
 Guayanabo, gwä-yä-nä'-bō.
 Guayanes, gwä-yä'-näs.
 Guilante, gē-län'-tä.

Hacienda Perla, ä-sē-ān'-dä pār'-lä.
 Hormigueros, ōr-mē-gā'-rōs.
 Hucares, oo-kār'-rās.
 Humacao, oo-mä-kä'-ō.

Intendente, ēn-tān-dān'-tā.
 Isabela, ēs-ä-bā'-lä.

Jacaguas, hä-kä'-gwās.
 Jelapa, ä-lä'-pä.
 Juanajebos, hoo-än-ä-hä'-bōs.
 Juan Diaz, hoo-än' dē-äs'.
 Juana Diaz, hoo-än'-ä dē-äs'.

Lares, lä'-rās.
 Las Marias, läs mä-rē'-äs.
 Las Tetas de Cerro Gordo, läs
 tät'-äs dē sār'-rō gōr'-dō.
 Loiza, lō-ē'-sä.
 Luquillo, loo-kēl'-yō.

Machete, mä-chā'-tā.
 Majagua, mä-hä'-gwā.
 Mala Pascua, mä'-lä pās'-kwä.
 Manatí, mä-nä-tē'.
 Martín Peña, Mär'-tēn Pān'-yā.
 Maunabo, mä-oo-nä'-bō.
 Mayaguez, mä-yä-gwās'.
 Mayama, mä-yä'-mä.
 Moca, mō'-kä.
 Mona, mō'-nä.
 Monserrate, mōn-sār-rä'-tā.
 Morro, mōr'-rō.

Naguabo, nä-gwä'-bō.

Palo Seco, pä'-lō sāl'-kō.
 Parguera, pār-gwā'-rä.
 Pepinos, pä-pē'-nōs.
 Plata, plä'-tä.
 Playa, plä'-yā.
 Plaza, plä'-sä.

Ponce, pōn'-sä.
 Porto Real, pōr'-tō rā-äl.
 Porto Rico, pōr'-tō rē'-kō.
 Prieto, prē-ā'-tō.
 Pueblo Viejo, poo-āb'-lō vē-ā'-hō.
 Punta Santiago, poon'-tä sän-tē-ä'-
 gō.

Quintana, kēn-tä'-nä.

Rincón, rēn-kōn'.
 Río Grande, rē'-ō grän'-dā.
 Río Guanabo, rē'-ō gwä-nä'-bō.
 Río Piedras, rē'-ō pē-ā'-drās.

Saba Grande, sä'-bä grän'-dā.
 Sabana, sä-bä'-nä.
 Sabanita, sä-bä-nē'-tä.
 Salinas, sä-lē'-nās.
 Salto de los Morones, sāl'-tō dā lōs
 mō-rō'-nās.
 San Cristobal, sän krēs-tō'-bäl.
 San Francisco, sän frän-sēs'-kō.
 San German, sän här-män'.
 San Juan, sän hoo-än'.
 San Sebastian, sän sā-bäs-tē-än'.
 Santa Allala, sän'-tä äl-lä'-lä.
 Santa Alta, sän'-tä äl'-tä.
 Santo Domingo, sän'-tō dō-mēn'-gō.
 Santurce, sän-toor'-sä.

Tabanuco, tä-bä-noo'-cō.
 Tanama, tä-nä'-mä.
 Toa Alta, tō'-ä äl'-tä.
 Torre, tōr'-rä.

Utuatedo, oo-too-ä'-dō.

Vieques, vē'-ā-kās.

Yabucoa, yä-boo-kō'-ä.
 Yauco, yä-oo'-kō.

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